

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2nd Annual Report for the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program

October 2024

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Executive Summary

Introduction

The South Coast Air Quality Management District (South Coast AQMD) is the regional air quality regulatory agency for all of Orange County and large portions of Los Angeles, Riverside, and San Bernardino counties including portions of both the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The South Coast AQMD has the authority to adopt and implement rules and regulations that control emissions from indirect and areawide sources to meet air quality standards within its jurisdiction. Based on this authority, the 2016 Air Quality Management Plan (AQMP) committed South Coast AQMD to develop local Facility Based Mobile Source Measures, including Control Measure MOB-03 – Emission Reductions at Warehouse Distribution Centers. On May 7, 2021, the South Coast AQMD Governing Board adopted Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Rule 316 – Fees for Rule 2305 to satisfy this AQMP commitment and reduce regional and local emissions of nitrogen oxides (NO_x) and diesel particulate matter (DPM). The mitigation actions required by the rule will assist in meeting state and federal ambient air quality standards for ozone and fine particulate matter and improve public health, especially in communities that are located near warehouses.

South Coast AQMD Rule 2305 includes a menu-based points system requiring warehouse operators to earn a specified number of points annually to facilitate local and regional emission reductions associated with warehouses subject to the rule, and the mobile sources attracted to these warehouses. Rule 2305 applies to both operators and owners of warehouses greater than or equal to 100,000 square feet of indoor floor space within a single building that may be used for warehousing activities. Through the implementation of Rule 2305, warehouse facility owners and operators will be phased in to the program over a 3-year period based on warehouse size,¹ with the stringency increasing over a 3-year period once a warehouse is in the program.

Purpose

This 2nd WAIRE Program Annual Report is prepared pursuant to South Coast AQMD's May 7, 2021, Governing Board Resolution No. 21-9. Each subsequent annual report will include updates on the status of rule implementation based on WAIRE Program activities that occurred since the previous annual report. This annual report will provide information on rule implementation activities, including outreach, reporting, mitigation fee program, enforcement, program results and other rule-related activities, including updates on development and/or enhancement of the WAIRE Program Online Portal (POP). The annual report will also identify the anticipated next steps for Rule 2305 implementation for the following year. This 2nd WAIRE Program Annual Report provides an overview of the WAIRE Program's implementation from rule adoption on May 7, 2021 through August 31, 2024.

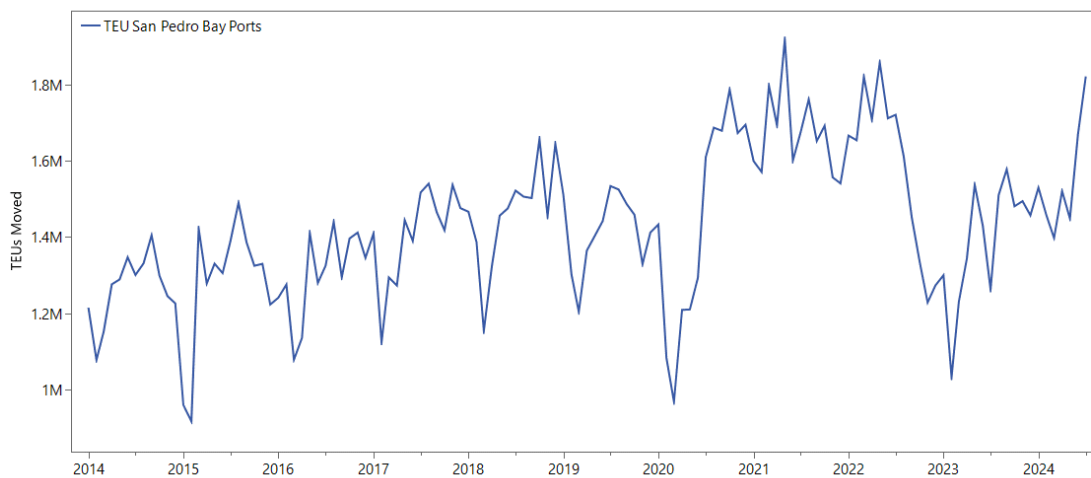
¹ Pursuant to Rule 2305(c)(33), “warehouse size” means the indoor floor space, measured in square feet, of an individual warehouse building that may be used for warehousing activities. There may be scenarios where the building’s “warehouse size” does not equal the total square feet within the building.

WAIRE Program Implementation Update

Goods Movement Industry in South Coast AQMD

The South Coast AQMD covers approximately 10,743 square miles and is home to the nation's largest marine ports, the ports of Los Angeles and Long Beach, which serve as the entry point for over a third of all cargo imported to the nation.² The goods movement sector has grown rapidly in recent years as reflected by the number of cargo containers handled by the San Pedro Bay ports (**Figure 1**). In 2023, about 25% of the goods movement through the ports was transported by train via the Alameda Corridor.³ The remaining approximately 75% of goods^{4,5} were transported by trucks, often visiting major warehouse facilities in the region.

Figure 1: San Pedro Bay Ports Twenty Equivalent Units (TEU) Throughput



A recent analysis of the warehousing sector within the South Coast AQMD's jurisdictional area from 2014 to 2024 reveals that the adoption and implementation of Rules 2305 and 316 had minimal impact on warehousing demand. This outcome is consistent with the Final Socioeconomic Impact Analysis for Rule 2305.⁶ In the last 10 years, the total inventory of warehousing space increased by 41% to 933 million square feet (**Figure 2**) warehouse rental prices increased by 164% to \$16.3 per square foot in Q2 2024 (**Figure 3**). In the last two years, post pandemic changes in consumer spending, record deliveries of new buildings, and other factors have increased the availability of warehouse's space. As a result, the vacancy rate climbed back from its all-time low in Q2 of 2022 to 6.7% in Q2 2024. Consequently, the rental prices that rapidly increased during the pandemic have seen a recent moderate decrease (**Figure 3**). These same changes in the aftermath of the pandemic have affected major warehousing markets similarly across the entire country. Major warehousing markets such as Dallas, Phoenix, and Atlanta have experienced a rise in vacancy rates and a decline in rental prices, as illustrated in **Figure 4**.

² <https://data.bts.gov/stories/s/Port-Data-Catalog/6kur-q9xk>

³ https://www.acta.org/wp-content/uploads/2022/07/Train_Counts.pdf

⁴ <https://polb.com/business/port-statistics/#yearly-teus>

⁵ <https://www.portoflosangeles.org/business/statistics/container-statistics>

⁶ <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf>

Figure 2: Total Warehousing Area and Number of Warehouses in South Coast AQMD area. The vertical black line represents Rule 2305's adoption date (May 7, 2021)

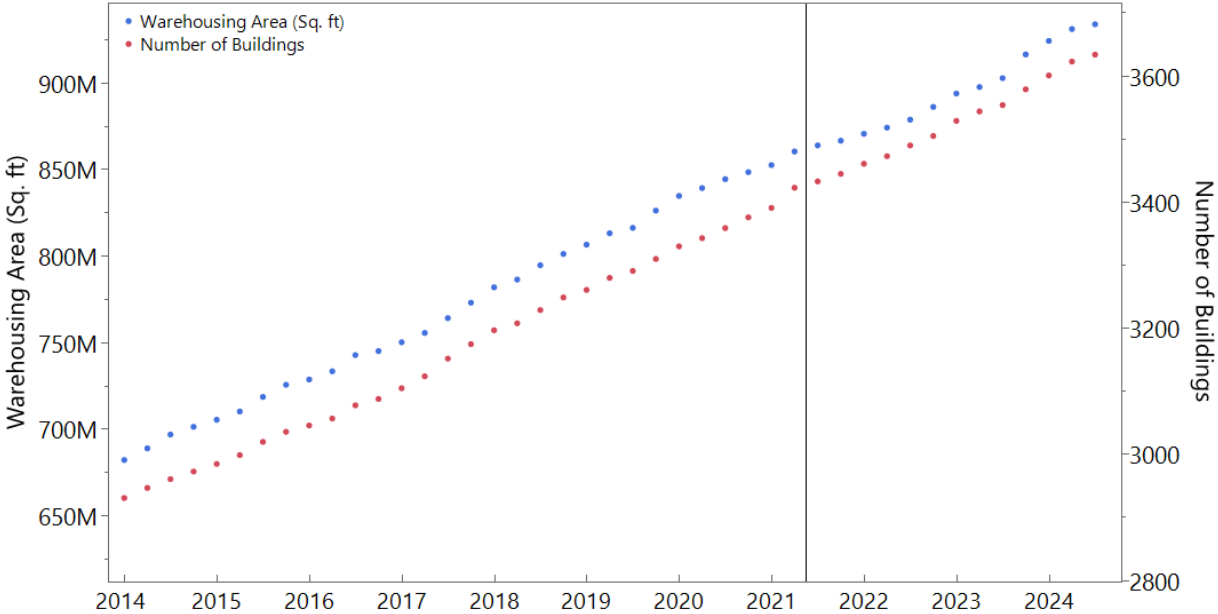


Figure 3: Vacancy Rate (%) and Rental Price (\$/sq ft) in the South Coast Air Basin (SCAB) area, from 2014 to 2024. The vertical black line represents Rule 2305's adoption date (May 7, 2021)

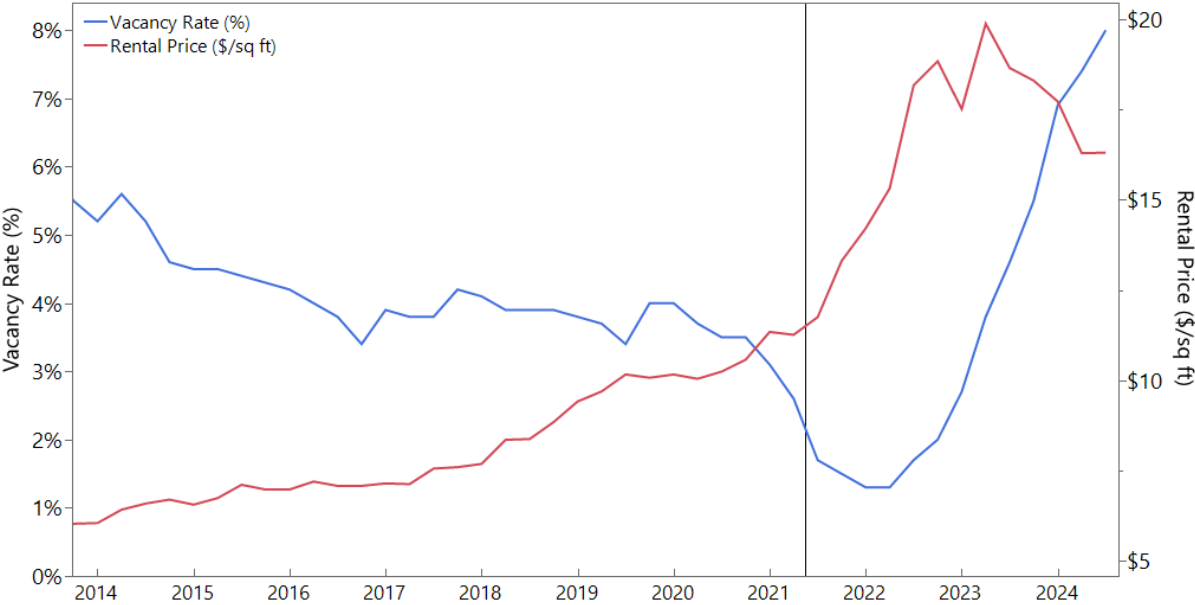
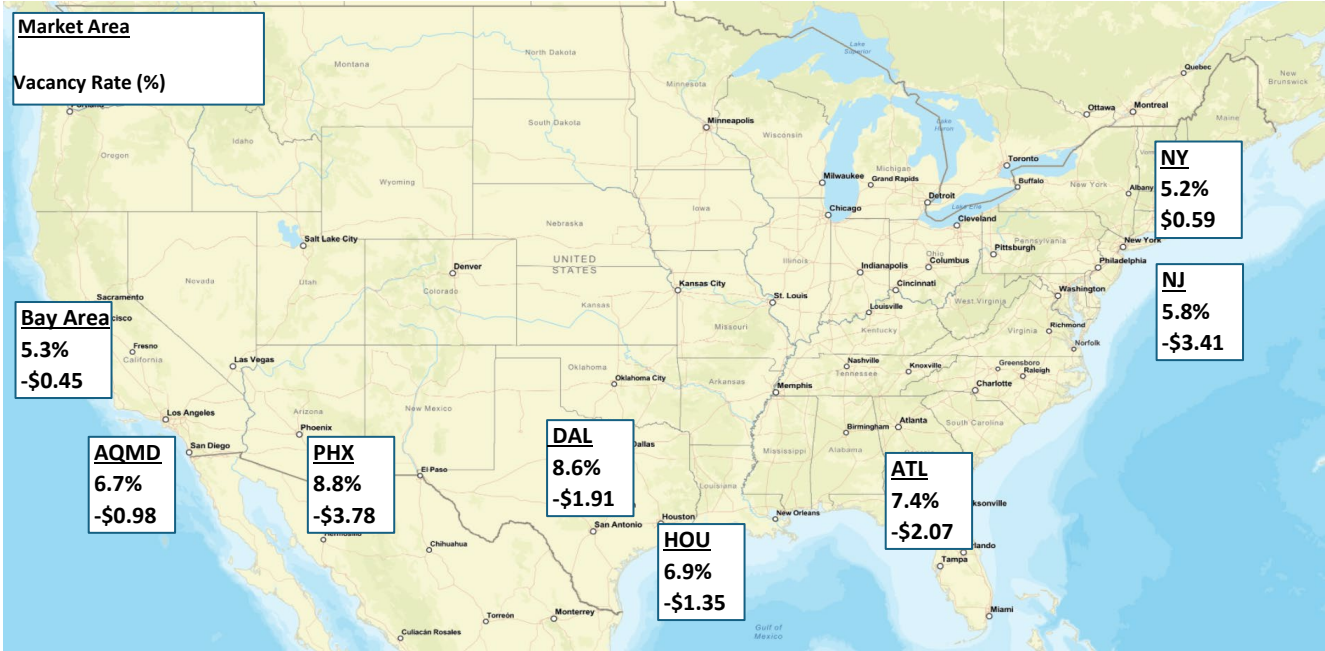


Figure 4: Vacancy Rate (%) and Change in Rent (\$/sq ft) between Q2 2022 and Q2 2024



Warehouse Population Potentially Subject to the WAIRE Program

The population of warehouses potentially subject to the WAIRE Program in Appendix C: Warehouse Population Methodology of the Final Staff Report⁷ was based on a snapshot in time. At the time of rule adoption, South Coast AQMD staff estimated that approximately 3,320 warehouses may be subject to Rule 2305 requirements.⁸ However, not all these warehouses were expected to be required to earn WAIRE Points if they did not conduct “warehousing activities” as defined in Rule 2305. For example, recording studios, manufacturing, and retail facilities are typically not considered warehousing activities for the purpose of the rule. These larger buildings may still be subject to limited reporting including the reporting of basic facility information.

Recognizing that the number of warehouses has continued to increase since rule adoption (see **Figure 5**), South Coast AQMD staff updated its previous estimate of the potential warehouse universe subject to Rule 2305 for this 2nd WAIRE Program Annual Report. Based on August 2024 CoStar data, the potential warehouse inventory increased in all three warehouse phases since rule adoption (**Figure 5**).⁹ Additional were identified as potentially subject to Rule 2305 requirements, increasing the population to 3,655 warehouses. **Figure 6** identifies the locations of the warehouses potentially subject to Rule 2305. The potential implementation phase of each warehouse is color-coded in this figure.

⁷ Rule 2305 Governing Board package and Final Staff Report, <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf>.

⁸ The data and the methodology that led to this estimation are described in detail in Appendix C of the Final Staff Report.

⁹ The phase of rule implementation is based on the warehouse size in square feet.

Figure 5: Potential Warehouse Buildings in 2020 vs 2024 Subject to Rule 2305 by Phase (as identified in CoStar)

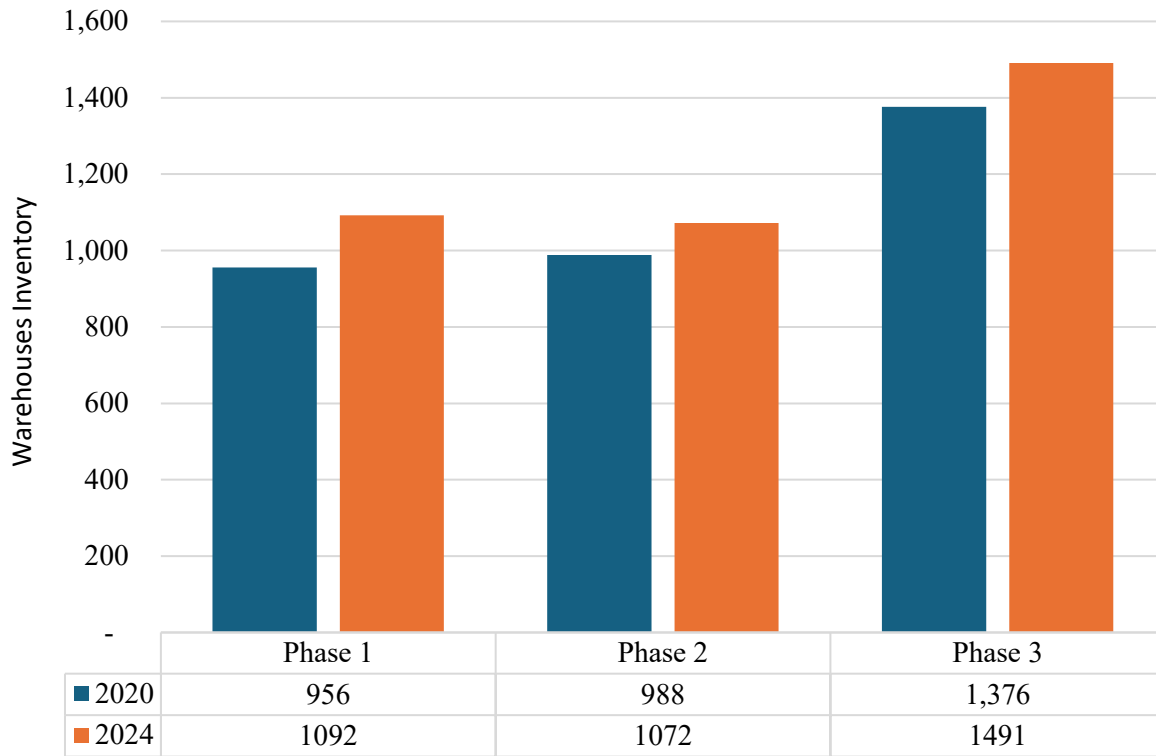


Table 1: Potential Universe of Warehouse Buildings Based on CoStar and R2305 Reporting

	Phase 1 (≥250,000 sf)	Phase 2 (≥150,000 - <250,000 sf)	Phase 3 (≥100,000 - <150,000 sf)	Total
CoStar Potential Universe	1,092	1,072	1,491	3,655
Additional Buildings Reported	94	65	95	254
Total Potential Universe	1,186	1,137	1,586	3,909

WAIRE Program Reporting Overview

Warehouse facility owners and operators subject to Rule 2305 are required to submit reports to South Coast AQMD to provide details on their applicable warehouse operations and compliance. **Table 2** provides an overview of the reporting requirements for Rule 2305.

Table 2: Rule 2305 Reporting Overview

		Warehouse Facility Owners	Warehouse Operators		Warehouse Operators	
Phase	Warehouse Size (Square Feet)	Warehouse Operations Notification (WON) * Due Date	Initial Site Information Report (ISIR) (One-Time)		Annual WAIRE Report (AWR)	
			Reporting Period	1 st Due Date	1 st Compliance Period	1 st Due Date***
1	≥250,000	September 1, 2021**	Previous 12 Months and Anticipated for AWR	July 1, 2022	January 1, 2022 – December 31, 2022	January 31, 2023
2	≥ 150,000 - <250,000		Previous 12 Months and Anticipated for AWR	July 1, 2023	January 1, 2023 – December 31, 2023	January 31, 2024
3	≥100,000 - <150,000		Previous 12 Months and Anticipated for AWR	July 1, 2024	January 1, 2024 – December 31, 2024	January 31, 2025

*Warehouse Operations Notification is the only required reporting obligation for warehouse facility owners subject to Rule 2305, see Rule 2305(d)(7)(A).

**Or within 14 days of operator change or 30 days after renovation that changes the square footage.

***If the warehouse operator vacates the warehouse during the compliance period, the AWR is due the date the operator leaves.

Warehouse Operations Notification (WON)

Warehouse facility owners subject to Rule 2305 are required to submit a Warehouse Operations Notification (WON). The WON requirement applies to warehouse facility owners (or landowners) of warehouse buildings with greater than or equal to 100,000 square feet of indoor floor space in a single building. The due date for submitting the WON to the South Coast AQMD was September 1, 2021.¹⁰ A WON must be submitted by the warehouse facility owner, or an authorized official of the warehouse facility owner, through the WAIRE Program Online Portal (POP) reporting system.¹¹ The applicable

¹⁰ Rule 2305 sets forth requirements for warehouse facility owners to submit updated WON reports in a timely manner if warehouse operators change, if renovations occur and certificates of occupancy are provided, or if a formal request is made by South Coast AQMD. See Rule 2305(e)(1).

¹¹ WAIRE Program Online Portal (POP), <https://xappp.aqmd.gov/isr>.

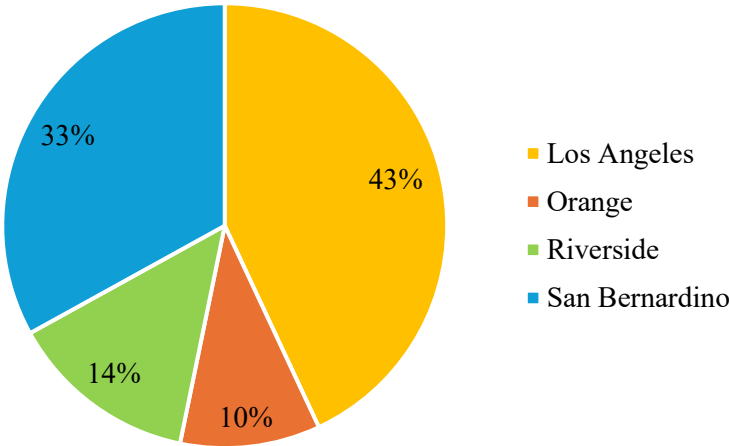
administrative/filing fee¹² was required at the same time as the WON submittal to be deemed a complete submittal.

Information required in the WON includes, but is not limited to, the following:

- Warehouse location and building size,
- Name and contact information of warehouse owner(s) and lessee(s),
- Start and end dates of each lease, square footage used by each lessee, and square footage usable for warehousing activities by each lessee.

By August 31, 2024, approximately 1,074 WONs were received, covering a total of 2,383 warehouses.¹³ This represents about 61% of the warehouse population potentially subject to Rule 2305 based on CoStar (August 2024) and the additional buildings identified in reports submitted to the WAIRE Program. The submitted WON reports include warehouses that vary by county and by phase, which is based on warehouse size, as depicted in **Figure 7** and **Figure 8**, respectively. The majority of warehouses include one tenant, however there are many warehouses with multiple tenants. The distribution of tenancy of the 2,383 warehouses can be found in **Figure 9**.

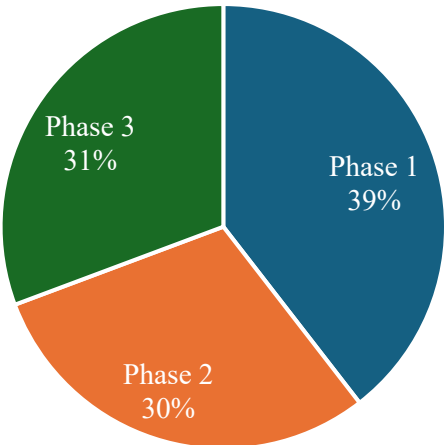
Figure 7: Warehouse Operations Notification Reports Received by County



¹² There is an administrative fee for the WON filing pursuant to Rule 316(d) due at the time of submittal. Warehouse facility owners submitting a WON for a warehouse with less than 100,000 square feet of floor area dedicated to warehousing activities are exempt from the reporting fee pursuant to Rule 316(h)(1).

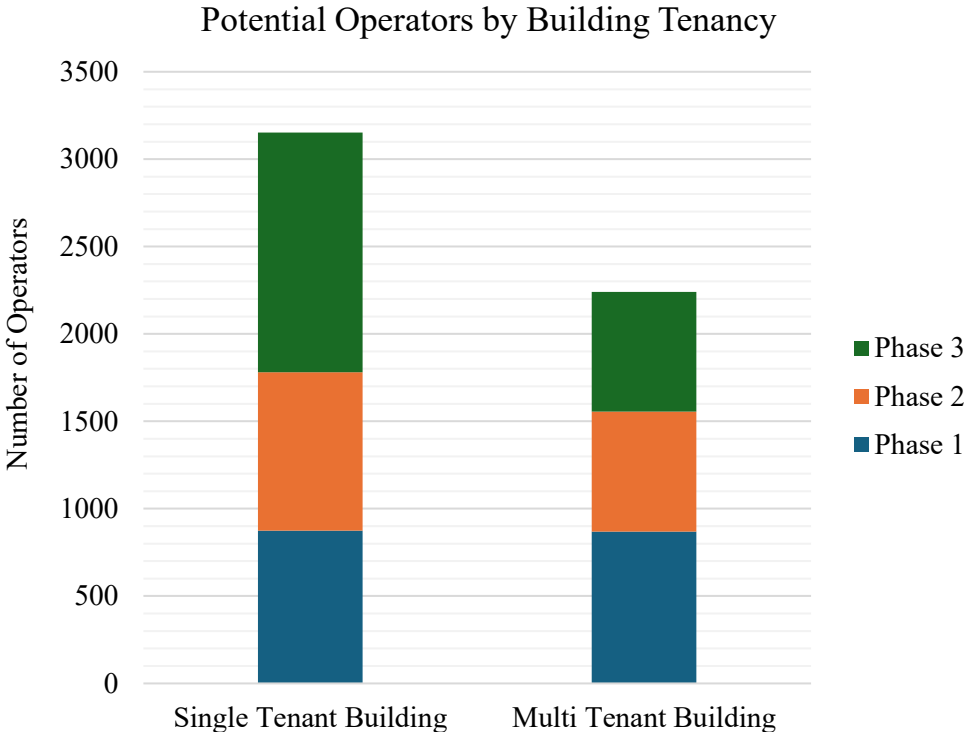
¹³ A single report submittal may include multiple warehouse facilities.

Figure 8: Warehouse Operations Notification Reports Received by Phase



South Coast AQMD plans to continue conducting targeted outreach to the remaining warehouse facility owners that have not submitted a WON. Additional compliance and enforcement actions will be pursued as well to ensure reporting is completed from all applicable facilities as required by the rule.

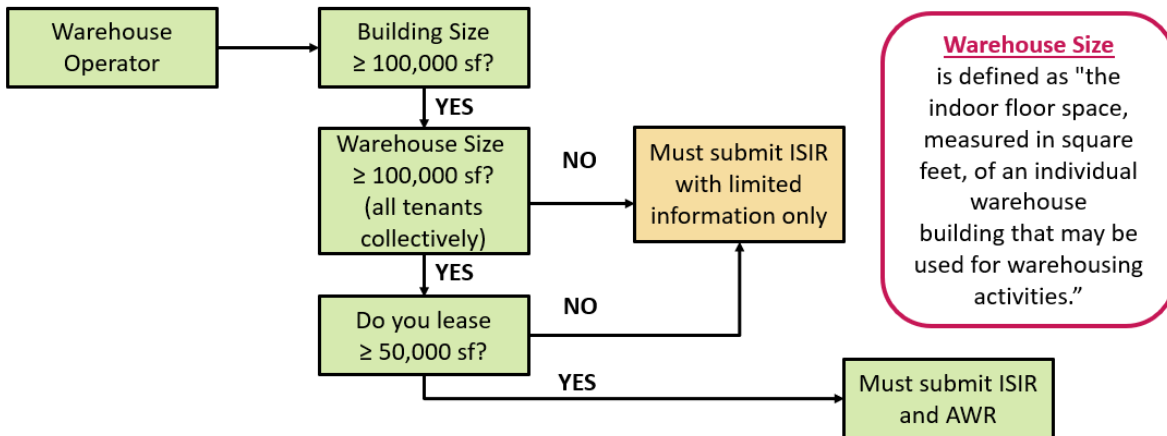
Figure 9: Single vs Multi-Tenant Warehouses According to WONs Received



Initial Site Information Report (ISIR)

Warehouse operators¹⁴ are required to submit an Initial Site Information Report (ISIR).¹⁵ There are cases where a warehouse operator may not be fully applicable to the WAIRE Program and would only need to submit an ISIR with limited information¹⁶. See **Figure 10** below for an explanation of WAIRE Program applicability for warehouse operators.

Figure 10: Simplified Flow Chart for Warehouse Operators’ Applicability



Information required in the ISIR includes, but is not limited to the following:

- The total indoor floor square footage of the applicable warehouse building and the amount of space the warehouse operator leases that may be used for warehousing activities,¹⁷
- Truck trip data including truck trips from the previous 12-month period and an estimate of the number of truck trips that will be reported during the applicable period for their upcoming Annual WAIRE Report (AWR),¹⁸
- Fleet information (owned and/or leased), including on-road trucks or tractors and yard trucks used at the facility,
- Any onsite charging or alternative fueling stations,
- Any onsite alternative energy generation or energy storage equipment, and
- Anticipated actions and/or investments the warehouse operator anticipates using to comply with the WAIRE Points Compliance Obligation (WPCO) for the reported compliance period (e.g., WAIRE Menu actions, a Custom WAIRE Plan, transferred WAIRE Points, and/or mitigation fees).

¹⁴ Warehouse operators may include, but are not limited to, warehouse facility owners or third-party logistics companies that serve as operators.

¹⁵ There is an administrative fee for the ISIR filing pursuant to Rule 316(d) due at the time of submittal. This fee increases annually. Warehouse operators who lease less than 50,000 square feet of a warehouse for warehousing activities and for which Rule 2305(e)(2)(A)(ii) applies are not required to pay the ISIR filing fee described in Rule 316(d).

¹⁶ See Rule 2305(b) and Rule 2305(e)(2)(A)

¹⁷ Warehousing activities is defined in Rule 2305(c)(33). Vacant areas that may be used for warehousing activities (e.g., empty storage racks, open floor space designed for warehousing, drive paths for pallet jacks or forklifts used in warehousing activities) must be included in the square footage calculation. Information listed in the bullet points following this one is not required if a warehouse operator that does not meet conditions (2) and/or (3), per Rule 2305(e)(2)(A).

¹⁸ This estimate could just be an extrapolation of the data reported above for the previous 12-month period or could include an estimate based on expected business through the end of the compliance period.

The ISIR due dates have passed for warehouse operators in all three phases¹⁹ of WAIRE Program implementation. The Phase 1 ISIR was due July 5, 2022; the Phase 2 ISIR was due July 5, 2023; and the Phase 3 ISIR was due July 2, 2024. Warehouse operators of new warehouse operations that are subject to Rule 2305 must submit an ISIR by July 1 of their first compliance period.²⁰ **Table 3** lists the total number of ISIRs received by South Coast AQMD as of August 31, 2024.

Table 3: ISIRs Received by Phase²¹

Submittal Date	Phase 1 (≥250,000 sf)	Phase 2 (≥150,000 - <250,000 sf)	Phase 3 (≥100,000 - <150,000 sf)	Total
On or Before Due Date	195	183	500	878
After Due Date	510	285	157	952
Total	707	481	642	1,830
Minimum Number of ISIRs Expected*	1,743	1,593	2,056	5,392

*The minimum number of ISIRs expected is based on the operators identified in the WONs received and the nonreporting warehouses identified using CoStar 2024 data, which assumes one tenant per building.

For additional details related to the ISIRs, see Appendix A. **Figure A-1** shows a comparison of ISIRs received and the potential universe subject to Rule 2305 by phase, including the additional buildings identified in the WONs.

Out of 1,830 ISIRs received, 354 ISIRs were submitted with limited information as allowed by Rule 2305(e)(2)(A)(i) and (ii) or were otherwise exempt from Rule 2305. These warehouse operators were required to only submit limited information in the ISIR including basic information about the warehouse (i.e., warehouse size and the square footage that may be used for warehousing activities within their operational control) and contact information. These operators are not required to earn WAIRE Points or submit Annual WAIRE Reports (AWRs). South Coast AQMD staff will continue outreach to ensure all rule requirements are being met, including accurately reporting applicability requirements.²² Staff began pursuing additional compliance and enforcement actions in 2023 to ensure reporting is completed from all applicable facilities as required by the rule (see WAIRE Program Enforcement and WAIRE Program Outreach & Implementation Efforts of this report for more details). Please see Appendix A of this report for more information related to the ISIRs. As stated in the WAIRE Implementation Guidelines, a portion of the ISIR is intended to be a planning exercise to assist the warehouse operators and South Coast AQMD in identifying the anticipated mechanisms that will be used for compliance. **Figure 11** provides an overview of the anticipated WAIRE Menu actions and mitigation fee points identified by the 1,476 ISIRs submitted by warehouse operators across three phases.²³ These reports show that a total of 561,102 WAIRE Points were anticipated to be earned by these warehouse operators in their first year of implementation. The anticipated aggregate WPCO for ISIRs received is approximately 81,698 Points. Operators that completed an ISIR anticipated they would earn nearly seven times the required WPCO. This indicates that compliance with Rule 2305 was anticipated to be feasible by these warehouse operators.

¹⁹ The phase of a warehouse operation is based on the warehouse size. Please see **Table 1**.

²⁰ Pursuant to Rule 2305(d)(7)(B).

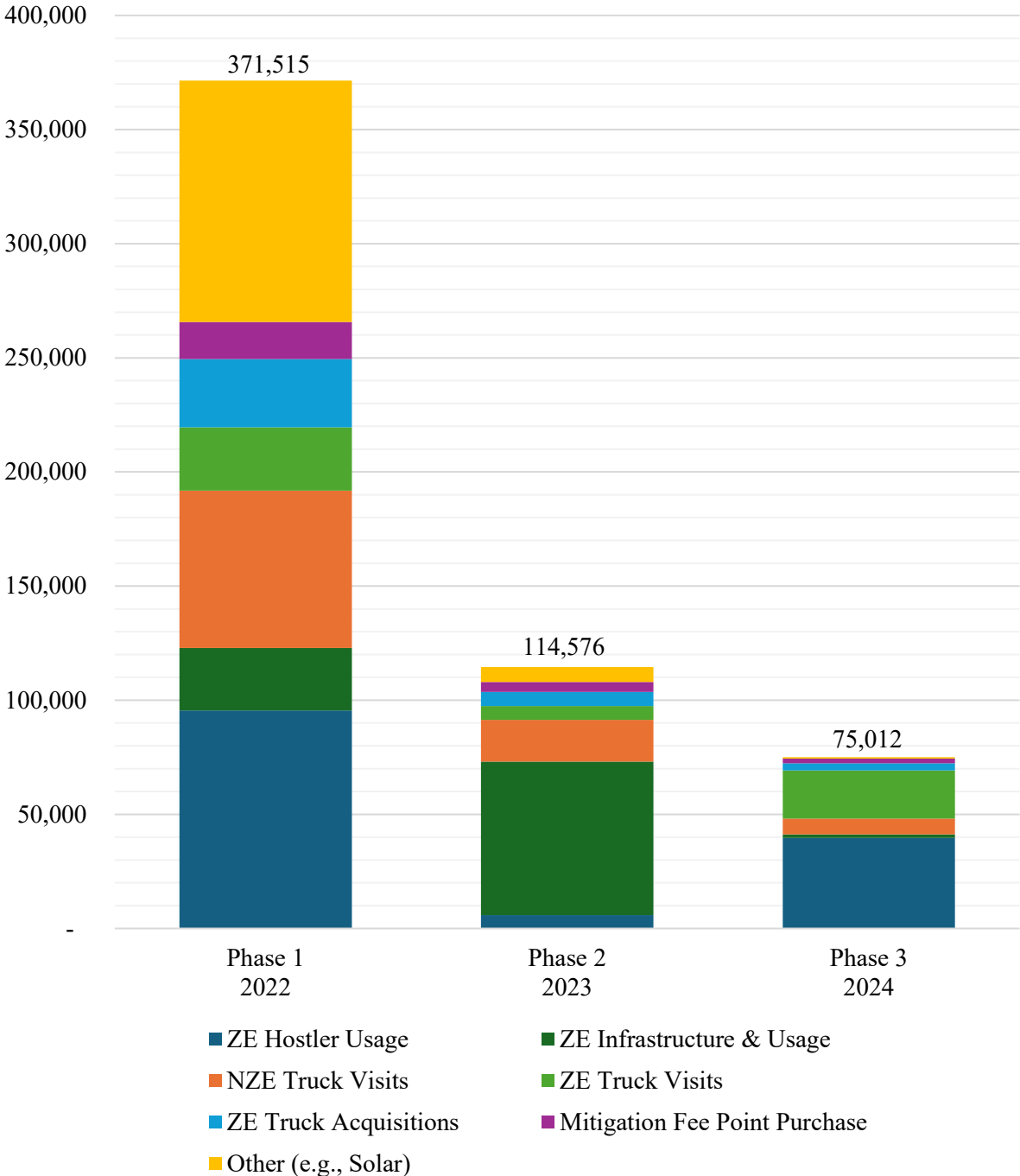
²¹ Subject to final auditing by South Coast AQMD.

²² Subject to final auditing by South Coast AQMD.

²³ This excludes ISIRs with limited reporting requirements, as those ISIRs are not required to earn WAIRE Points. Subject to final auditing by South Coast AQMD.

A complete list of the anticipated WAIRE Points to be earned by each WAIRE Menu action is provided in Appendix A. In addition to taking actions from the WAIRE Menu, the operators anticipated earning about 4% of all WAIRE Points through payment of mitigation fees, totaling about \$22.6 million.

Figure 11: Total Anticipated WAIRE Points and WAIRE Menu Actions as Identified in the Initial Site Information Reports



Annual WAIRE Report (AWR)

Warehouse operators fully applicable to the WAIRE Program must submit Annual WAIRE Reports (AWRs).²⁴ AWRs may also be submitted by a warehouse facility owner if they chose to voluntarily earn WAIRE Points at an applicable warehouse location.²⁵ AWRs must be submitted by January 31 following the compliance period when the WAIRE Points were earned. If a warehouse operator vacates a warehouse before the AWR due date in any compliance period, they must submit an AWR no later than the date they vacate the warehouse.

Key information in each AWR includes the following:

- The number of truck trips entering/exiting the warehouse site for the compliance period, including the number of truck trips based on the truck weight classification grouping (Class 2b-7 and Class 8).
- Details showing how WAIRE Points were earned to satisfy the WPCO including:
 - Each WAIRE Menu action, and/or
 - Actions in an approved Custom WAIRE Plan, and/or
 - WAIRE Points transferred from another site or banked from a previous year, and/or
 - Mitigation fees (see "WAIRE Mitigation Fee Program" for more details).
- Key metrics for each type of action the WAIRE Points were earned.²⁶

Warehouse operators in Phase 1 were required to submit their first AWR by January 2023. Phase 2 operators were required to submit their first AWR by January 2024. Phase 3 operators will be required to submit their first AWR by January 31, 2025 for the 2024 Compliance Period. Once a warehouse operator begins reporting AWRs, they are required to submit a new AWR every year until Rule 2305 sunsets. **Table 4** lists the total number of AWRs received by South Coast AQMD as of August 31, 2024, including a breakdown by phase and compliance period. **Table 4** also shows the estimated number of AWRs that is expected based on the potential universe.

²⁴ There is an administrative fee for the AWR filing pursuant to Rule 316(d) due at the time of submittal. This fee increases annually. See Rule 2305(b) and (d)(1).

²⁵ Pursuant to Rule 2305(d)(6)(C), warehouse facility owners may transfer earned WAIRE Points to a warehouse operator at the warehouse facility at which the WAIRE Points were earned.

²⁶ See Table 3 – WAIRE Menu of Rule 2305.

Table 4: AWRs Received by Phase and Compliance Period ²⁷

Phase	Compliance Period		
	2022	2023	Total
Phase 1	612	578	1,190
Phase 2	-	366	366
Total	612	944	1,556
Estimated Number of AWRs Expected*	1,408	2,694	4,102

*The estimated number of AWRs expected is based on the operators identified in the WONs received and CoStar 2024 data, which assumes one tenant per building. These numbers exclude those operators that are not required to earn WAIRE Points.

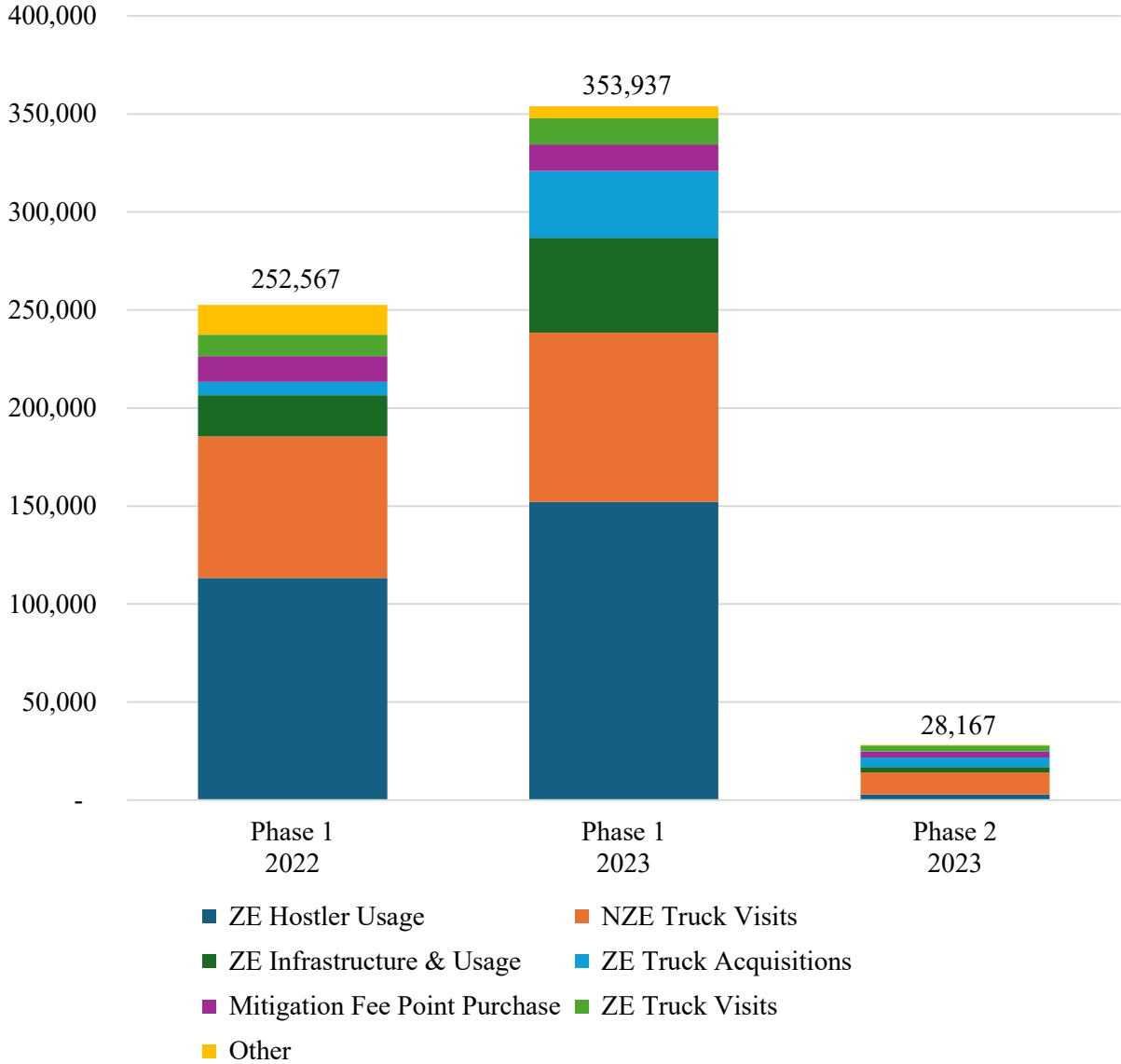
The warehouse operators who submitted an AWR reported earning a total of about 634,671 WAIRE Points across all options in the first two compliance periods of the program, exceeding the total WAIRE Points Compliance Obligation (WPCO) of about 163,347 WAIRE Points reported by these entities. The reported WPCO is based on the total annual truck trips in 1,556 AWRs submitted by 1,008 warehouse operators over the first two compliance periods. Total earned WAIRE Points are nearly four times higher than the total reported WPCO in the first two compliance periods for those submitting AWRs.²⁸ The analysis in the staff report for Rule 2305 anticipated that the total WPCO across all warehouse operators in the first two compliance periods would be 457,273. The total earned WAIRE Points from operators who submitted AWRs is 1.4 times more than the total anticipated from all warehouses.

In March 2024, staff presented an update on the WAIRE Program to South Coast AQMD's Mobile Source Committee which included preliminary results from the Annual WAIRE Reports for the 2023 compliance period. During this presentation, staff noted an anomaly in the WAIRE Points earned from solar panel installation and usage and indicated an audit would be done to see if the points were mis-reported. Staff also found outliers in the usage data for ZE yard hostlers operated by a warehouse operator at multiple locations. Staff conducted audits of these Annual WAIRE Reports and found there were reporting errors made by the warehouse operators for these Menu actions. Staff obtained the records to verify that the actions were completed as reported but the annual metric was entered into the online reporting system erroneously. Staff has corrected these items for the 2023 compliance period as shown in the following figures, including **Figures 12, 13, 18 and 19**.

²⁷ These totals do not include voluntary AWRs submitted by warehouse facility owners, nor warehouse operators who submitted an early action AWR prior to their first AWR due date. Also, Table 3 totals (AWRs) are expected to be less than Table 2 totals (ISIRs) as some operators only report basic information in an ISIR and are not required to earn WAIRE Points.

²⁸ WAIRE Points earned in excess of the warehouse operator's WPCO in one compliance period may be banked for use in any of the next three compliance periods, after which they expire. Excess WAIRE Points earned for one warehouse may also be transferred to another of that operator's warehouses during that compliance period.

Figure 12: Total WAIRE Points Earned by Phase and Compliance Period by Warehouse Operators Who Submitted an AWR²⁹



²⁹ Subject to final auditing by South Coast AQMD.

Figure 13: WPCO, Earned WAIRE Points, and Mitigation Fee Points by Phase and Compliance Period for Operators Who Submitted an AWR³⁰

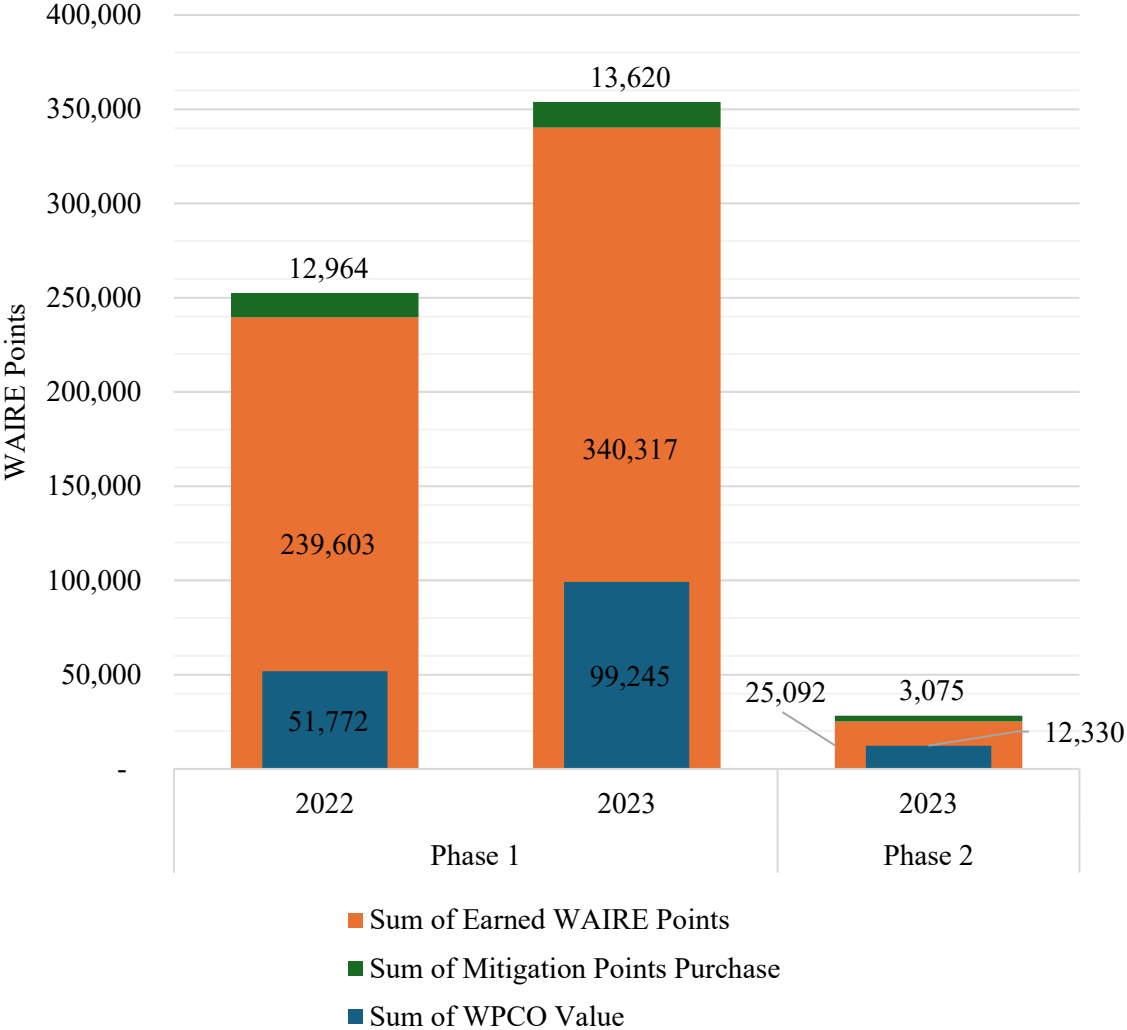
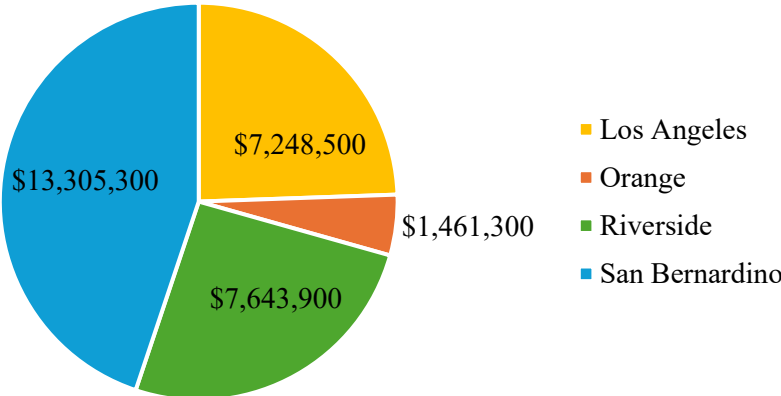


Figure 12 provides an overview of the WAIRE Menu actions and Mitigation Fee Points selected by warehouse operators who submitted the AWRs. Zero Emission (ZE) hostler usage (i.e., yard tractors that move trailers and containers around warehouse facilities) accounts for about 42% of the reported total WAIRE Points earned across the two compliance periods. Additional major categories were NZE Truck Visits (~27%) and ZE Infrastructure & Usage (~11%).³¹ A complete list of all the WAIRE Points by category are provided in Appendix B. **Figure 13** shows a comparison of the total WPCO compared to the total number of earned WAIRE Points and Mitigation Fee Points broken down by Phase and Compliance Period.

³⁰ Subject to final auditing by South Coast AQMD.

³¹ Subject to final auditing by South Coast AQMD.

Figure 14: Mitigation Fee Points Purchased in the 2022-2023 Compliance Periods



In lieu of earning points from the WAIRE Menu or through a Custom WAIRE Plan, warehouse operators can choose to earn WAIRE Points by paying a mitigation fee at \$1,000 per WAIRE Point.³² Mitigation fees paid by warehouse operators in each county are shown **Figure 14**. The warehouse operators reported approximately \$29.7 million in mitigation fees, which accounts for approximately 5% of the total WAIRE Points earned through the AWRs across the first two compliance periods.

Custom WAIRE Plans Applications

The WAIRE Program allows the submission of Custom WAIRE Plans (CWPs) for innovative actions not listed in the WAIRE Menu. In 2023, staff evaluated eight CWP applications from eight facilities, ultimately approving three. The three approved plans were submitted by Maersk Warehousing & Distribution Services USA LLC (Maersk) and enable Maersk, in partnership with Prologis, to earn WAIRE Points for the construction and installation of 96 electric vehicle (EV) charging ports at an offsite yard (also known as the "Denker Yard") located in Torrance, CA. Figure 15 shows the EV charging ports installed at the Denker Yard and the zero emission, battery-electric trucks operated by Maersk plugged into the charging stations. The approved CWPs are available on the WAIRE Program website at [webpage](#).

Figure 15: Class-8 EV truck charging at Denker Yard



³² Pursuant to Rule 316, there is also a 6.25% administrative fee associated with the mitigation fee.

Early Action Annual WAIRE Reports (AWR)

Rule 2305(d)(6)(B)(iii) allows a warehouse owner or operator to voluntarily submit an Early Action AWR prior to their first compliance period. A warehouse operator may earn WAIRE Points prior to their first compliance period and these WAIRE Points may be banked up to three years after the warehouse operator's first compliance period. Early Action AWRs follow all the requirements of AWRs, except Early Action AWRs do not require truck trip information or WPCO reporting since they are filed prior to the initial compliance period. All Early Action AWRs must be submitted at the end of the compliance period when the WAIRE Points were earned through the WAIRE POP reporting system.

Table 5 shows a breakdown of all the Early Action AWRs received. The 2023 Compliance Period was the last year that Early Action AWRs were accepted from warehouse operators as operators of all phases are now required to submit an AWR every year.

Table 5: Early Action AWRs Received by Phase and Compliance Period ³³

Phase	Compliance Period			Total
	2021	2022	2023	
Phase 1	74	-	-	74
Phase 2	13	53	1	67
Phase 3	13	24	24	61
Total	100	77	25	202

Overall, 82 companies submitted Early Action AWRs for 170 locations, comprising of 202 total reports over three compliance periods. These early action reports included about 79,918 earned WAIRE Points. These WAIRE Points are in addition to the 634,671 total earned Points in regular AWRs.

Most of the WAIRE Menu actions were implemented by Phase 1 warehouses, followed by Phase 2 and Phase 3 warehouses. South Coast AQMD conducted desktop audits of the 109 reports submitted to verify that the WAIRE menu items selected were implemented after rule adoption. In addition to ensuring compliant activity, in instances where there are multiple warehouses that have provided incorrect information, South Coast AQMD staff has updated the Frequently Asked Questions document to provide more clarity (e.g., clarifying the definition of “warehouse size”).³⁴ **Figure 15** shows the reports received as Early Action AWRs by county. **Figure 16** provides an overview of the WAIRE Menu items selected as early actions. A complete list of all the menu actions reported by category is provided in Appendix C.

³³ Subject to final auditing by South Coast AQMD.

³⁴ Frequently Asked Questions document, https://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/r2305_faqs.pdf?sfvrsn=20

Figure 16: Early Action AWR Submittals by County for the 2021-2023 Compliance Periods

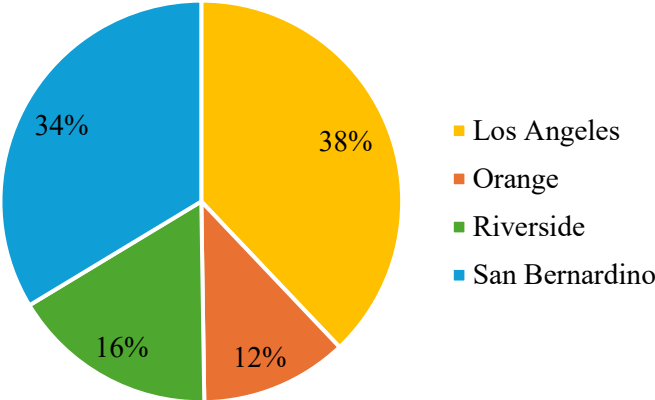
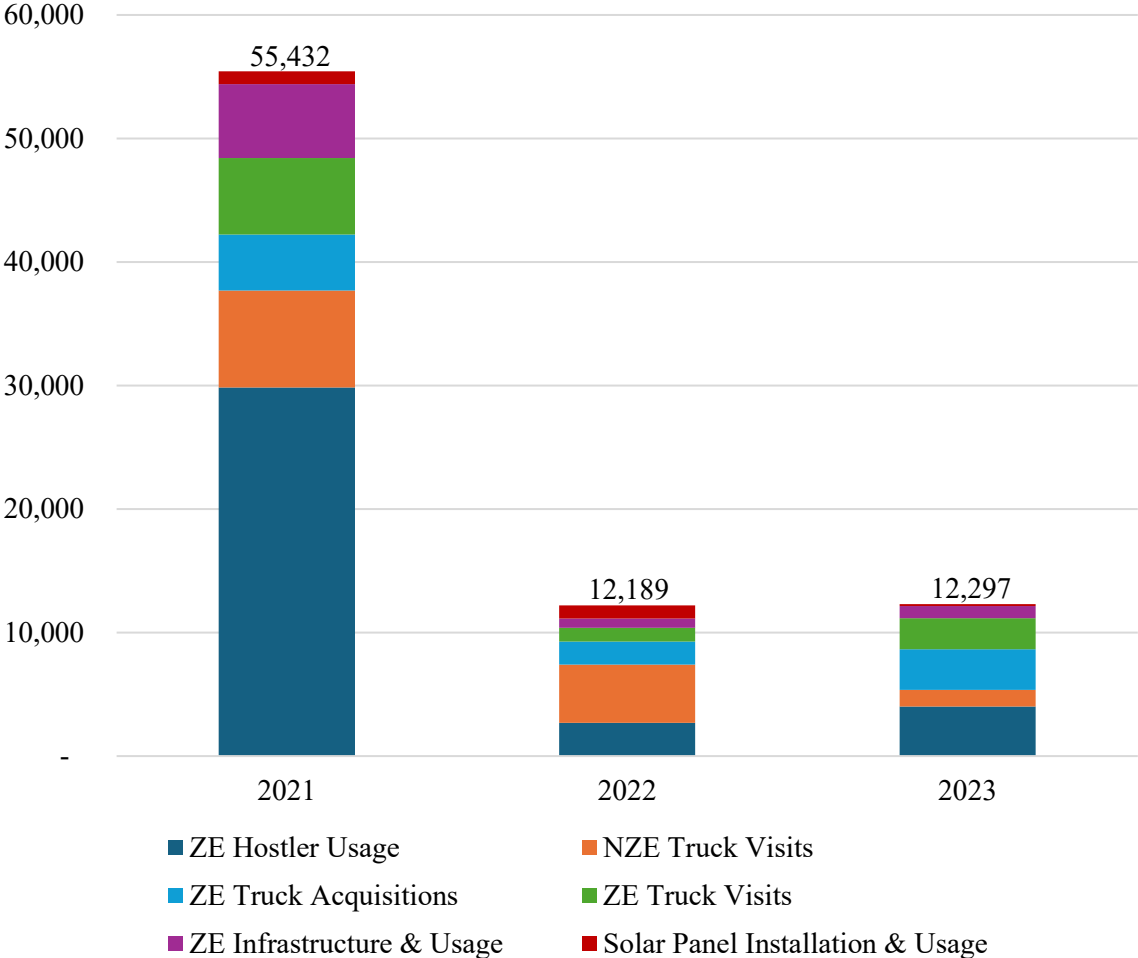


Figure 17: WAIRE Points Earned as Reported in Early Action AWRs by Compliance Period



Administrative Fees

Rule 316 establishes the administrative fees for Rule 2305 to recover the costs associated with implementation of the WAIRE Program. South Coast AQMD staff estimate, based on the potential warehouse universe shown in **Table 1**, that the administrative fee revenues should include a total of approximately \$2.1 million for the submittal of WONs, ISIRs and AWRs by the warehouse owners and operators³⁵. As of August 31, 2024, South Coast AQMD has received approximately \$1 million in revenue based on the Rule 316 fee schedule. The revenue pursuant to Rule 316 is expected to increase as the reporting/compliance rates continue to improve. Please see Appendix D: Estimate of Filing Fees from WAIRE Program Reporting for additional details.

Emission Reductions

The AWRs received document the actions and/or investments that were completed by warehouse operators to comply with the rule. The following actions completed by warehouse operators can be directly associated with emission reduction: Solar Panel Usage, NZE Truck Visits, ZE Truck Visits, and ZE Hostler Usage. Other actions completed by warehouse operators can help to facilitate emission reductions, such as: H₂ Station Usage, Charger Usage, and TRU Plug Usage. The methodology and data used to calculate the emission reductions associated with the WAIRE Menu actions are described in detail in Rules 2305 & Rule 316 Final Staff Report.³⁶

Warehouse operators who select these action items are required to report key metrics associated with each action in their annual WAIRE Report. For example, a warehouse operator that has a solar panel system installed on its roof can report the solar system usage and the annual amount of solar energy that it generated in kilowatt-hours (kWh).

Table 6 includes the detailed accounting of key metrics for actions that can be directly associated with emission reductions (for a complete list of the reported metrics see Table A-2). Based on the AWRs and EAWRs received, the NO_x and DPM emission reductions from NZE/ZE Truck Visits, Solar Panel Usage and ZE Hostler Usage reached 0.86 and 0.02 tons per day (tpd) in 2023, respectively. The reported metric units³⁷ over the last three compliance periods show a strong adoption and implementation of actions that contribute to emission reductions (**Figure 18** and **Figure 19**) The reported metrics of using zero emission charging or fueling infrastructure have also demonstrated strong adoption (**Table 7**).

³⁵ Excluding Phase 3 AWRs, which are due January 31, 2025.

³⁶ Rule 2305 Governing Board package and Final Staff Report, <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf>

³⁷ This information was reported by warehouse operators and may be subject to final auditing by South Coast AQMD.

Table 6: Total Level of Activity as Reported by Warehouse Operators – Truck Visits and Usage

Menu Item	Metric Reported	Total Reported Activity per Compliance Period		
		2021	2022	2023
NZE Class 4-7 Truck Visits	Visits	1	101,502	184,195
NZE Class 8 Truck Visits	Visits	68,227	639,723	808,839
Solar Panel Usage	kWh	2,990,972	98,303,457	85,481,168
ZE Class 2b-3 Truck Visits	Visits	111	20,109	108,228
ZE Class 4-7 Truck Visits	Visits	-	6,818	16,721
ZE Class 8 Truck Visits	Visits	44,374	81,681	112,888
ZE Hostler Usage	Hours of Usage	102,549	398,775	544,147

Table 7: Total Level of Activity as Reported by Warehouse Operators – Zero Emission Charging/Fueling Usage

Menu Item	Metric reported	Total Reported Activity per Compliance Period		
		2021	2022	2023
Charger Usage	kWh	849,972	5,070,619	17,034,552
H2 Station Usage	Kg H ₂	-	11,541	107,808
TRU Plug Usage	kWh	-	36,986	1,521,270

Figure 18: NOx Emission Reductions from Reported Actions (tpd)

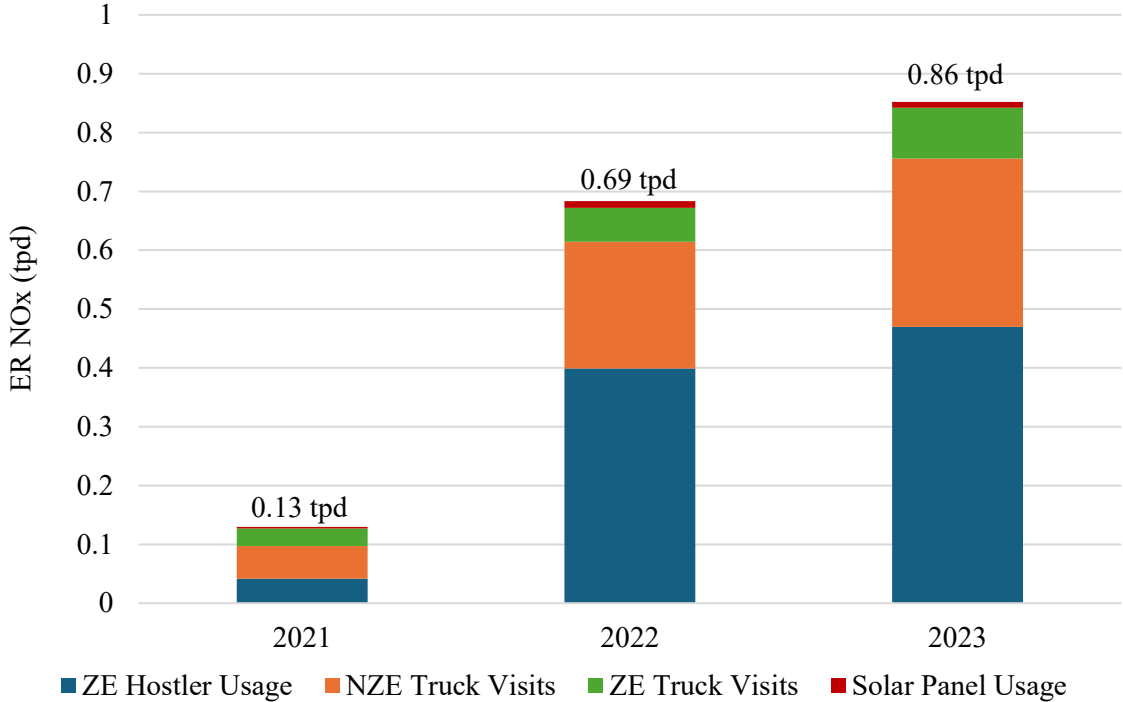
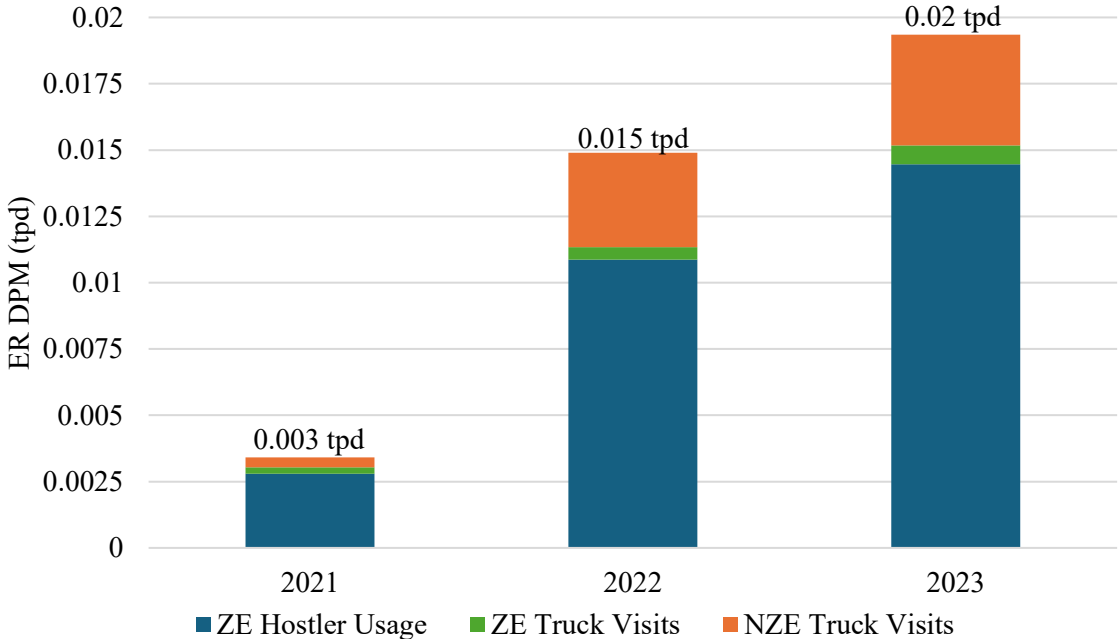


Figure 19: DPM Emission Reductions from Reported Actions (tpd)



WAIRE Mitigation Fee Program

In the Governing Board Resolution adopting Rule 2305, staff was directed to develop a WAIRE Mitigation Program with the funds generated from mitigation fee payments from Rules 2305 and 316.³⁸ Rule 2305 may generate funds to the WAIRE Mitigation Fee Program if a warehouse operator opts to offset their WAIRE Points Compliance Obligation (WPCO) by purchasing mitigation fee points through their Annual WAIRE Report (AWR) submittal. Rule 316 generates revenue through administrative fees that warehouse operators must pay to support South Coast AQMD Rule 2305's compliance activities, including implementation of the WAIRE Mitigation Program.

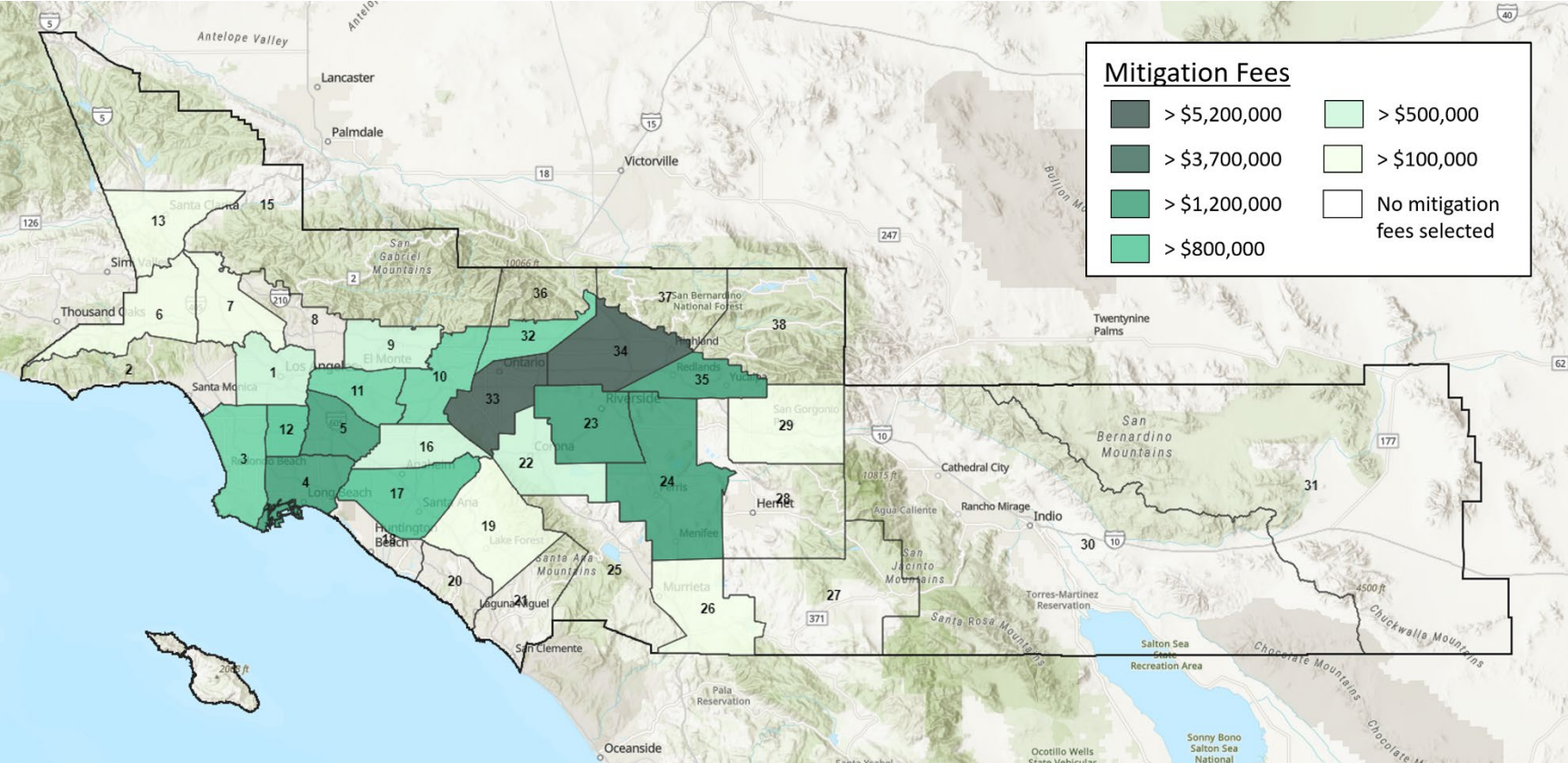
As of August 31, 2024, a total of \$29,659,000 million in mitigation fees have been reported for both compliance periods. Of this amount, \$26,615,100 has been fully paid. About \$3 million in mitigation fees have not yet been paid. The \$29.7 million in mitigation fees reported include about \$12,964,000 in mitigation fees by Phase 1 operators for the 2022 compliance period and \$16,695,000 in mitigation fees by Phase 1 and 2 operators for the 2023 compliance period.³⁹ Additional mitigation fees are expected to be reported for the 2024 compliance period as all three phases of warehouses are required to submit AWRs by January 31, 2025. In addition, the stringency of Rule 2305 continues to increase during the first five years of the WAIRE Program when some warehouse operators are expected to pay mitigation fees.

Mitigation fees paid by warehouse operators are compiled and tracked according to the Source Receptor Area (SRA), as shown in **Figure 19**, and county in which they are located. The WAIRE Mitigation Program will fund projects that achieve and/or facilitate emission reductions in the same SRAs and counties in which the mitigation fees were paid. If sufficient projects are not identified in each individual SRA relative to the available funding, funds may be directed either to an adjacent SRA in the same county or held for a subsequent funding cycle.

³⁸ <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf>

³⁹ Total amount may vary after amendments are finalized and/or refunds are issued. Subject to final auditing by South Coast AQMD.

Figure 20: Total Mitigation Fees Collected by Source Receptor Area



Prior to WAIRE Mitigation Program solicitations and awards, public outreach will be conducted to potential stakeholders, including but not limited to: community groups, local governments, and small businesses. Proposed solicitations and project awards will be presented at future Technology Committee meetings and to the Governing Board on an annual basis. South Coast AQMD's recently received a \$500 million Climate Pollution Reduction Grant (CPRG) from U.S. Environmental Protection Agency (U.S. EPA) that includes a significant component for zero emissions infrastructure, as well as dedicated community involvement. Staff anticipates aligning public processes and implementation efforts for the WAIRE Mitigation Program with the upcoming solicitations for the CPRG Grant and/or other applicable funding programs in early 2025.

Additionally, consistent with Rule 2305's and Rule 316's Governing Board Resolution, South Coast AQMD shall also ensure that:

- Funding from the WAIRE Mitigation Fee Program may be combined with other incentive funding programs, if allowed by the other funding program(s); and
- Any recipients of WAIRE Mitigation Fee Program funds for projects that involve construction work must use a skilled and trained workforce as defined in Public Contract Code section 2601 to perform such work; and
- Any recipients of WAIRE Mitigation Fee Program funds for projects that involve the installation of electric vehicle infrastructure shall: 1) be installed by a contractor with the appropriate license classification, as determined by the Contractors' State License Board, and at least one electrician on each crew, at any given time, holds an Electric Vehicle Infrastructure Training Program certification, and 2) meet a requirement that at least 25 percent of the total electricians working on an electric vehicle infrastructure project installing a charging port supplying 25 kW or more, at any given time, hold Electric Vehicle Infrastructure Training Program certification, consistent with the Public Utilities Code section 740.20; and
- Any recipients of WAIRE Mitigation Fee Program incentives or funding for the installation of ZE charging or fueling infrastructure for on-road vehicles that are not yard trucks must make the stations available for public use; and
- Consistent with existing South Coast AQMD funding programs, any recipients of WAIRE Mitigation Fee Program incentives shall disclose any labor violations in the three years prior to receiving funding and during the life of the funded project.

WAIRE Program Enforcement

A key component of WAIRE Program implementation is ensuring that applicable warehouses are aware of and in compliance with the requirements of Rule 2305 and Rule 316. South Coast AQMD staff conducted significant outreach to notify the warehousing industry of compliance requirements for the WAIRE Program. The *WAIRE Implementation Guidelines*⁴⁰ provide an initial overview of the compliance program anticipated at the time of rule adoption. South Coast AQMD will periodically conduct both desk and field audits to verify compliance with the WAIRE Program. An overview of the main requirements for Rule 2305 was provided in the *WAIRE Program Reporting Overview* section of this report. Rule 316 was developed as a companion rule to support South Coast AQMD's administration and enforcement of the WAIRE Program.

Throughout rule development and in the WAIRE Program's first three years of implementation, South Coast AQMD conducted significant outreach to identify warehouses that are subject to the rule. The outreach efforts have included, but are not limited to, field visits, mailing hardcopy fliers about the program, hosting webinars, participating in stakeholder webinars, developing online WAIRE Training Videos, presenting requested topics to stakeholders, sending informational emails through eNewsletter Pro, and fielding calls and emails to the WAIRE Program Hotline (909-396-3140) and Helpdesk (waire-program@aqmd.gov). For detailed information on the outreach efforts conducted, please refer to the *WAIRE Program Outreach & Implementation Efforts* section of this report.

As of August 31, 2024, South Coast AQMD inspectors have visited over 2,323 warehouse locations to provide outreach material. Through mid-October 2024, staff identified over 350 facilities that submitted late reports or failed to submit. As a result, the Office of Compliance and Enforcement issued over 350 Notices of Violation (NOVs). Staff will continue to identify non-compliant facilities and take the appropriate enforcement actions.

South Coast AQMD staff is continuing to conduct desk audits of the reported information in AWRs. Audits are also ongoing for reported information in the WONs. The audits are conducted to verify reported information and assure that the warehouse facility owners and operators are following recordkeeping requirements.⁴¹ Audits will also be conducted to verify exemptions claimed through report submittals, and that AWRs filed late accurately report their actions. As with other compliance activities conducted by South Coast AQMD, inspectors may conduct unannounced site visits to see how a facility operates and to verify WAIRE Menu items implemented through the WAIRE Program. If inspectors observe a potential violation, a Notice to Comply (NC) may be issued to request information or to order the facility to take corrective action. If noncompliance with air quality rules is identified, however, a NOV may be issued to inform a business that it is out of compliance with specific South Coast AQMD rule requirements or permit conditions. NOVs are referred to the South Coast AQMD Office of General Counsel for settlement negotiations and can result in civil penalties. If no settlement is reached, a civil lawsuit may ultimately be filed in superior court.⁴²

⁴⁰ <https://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/waire-implementation-guidelines.pdf>

⁴¹ Rule 2305 requires that all records used to demonstrate compliance with all reporting requirements shall be maintained by warehouse operators (or owners if applicable) for a period of no less than seven years and made available to South Coast AQMD upon request during normal business hours to determine compliance.

⁴² More information can be found on the South Coast AQMD website:
<https://www.aqmd.gov/nav/about/authority/enforcement>.

WAIRE Program Outreach & Implementation Efforts

As part of the adopting Resolution for Rule 2305 and Rule 316, the South Coast AQMD Governing Board directed South Coast AQMD staff to conduct outreach to applicable warehouse facility owners and operators to provide training and guidance on how to comply with Rule 2305 with emphasis on warehouse operators that are small businesses. The WAIRE Program Hotline (909-396-3140) and Helpdesk email inbox (waire-program@aqmd.gov) were established to directly assist regulated entities with WAIRE Program questions and information about the Program, especially regarding rule applicability and reporting requirements. The hotline and email address were also used to provide outreach, compliance assistance, and schedule individual facility consultations. Since rule adoption, South Coast AQMD has responded to over 10,300 calls and emails to the WAIRE Program Hotline and Helpdesk.

Staff developed guidance resources to assist warehouse facility owners and operators in submitting the reports as required by Rule 2305, and to provide information to the public about rule compliance options. As part of the outreach plan, South Coast AQMD staff setup the Rule 2305 WAIRE Program Compliance Website (www.aqmd.gov/waire), which went live in June 2021. There have been over 73,700 visits to the website since it went live. This website was designed to provide a central hub for all web-based resources to assist warehouse facility owners and operators subject to the rule requirements by providing online access to compliance guidance documents and program resources such as the:

- WAIRE Implementation Guidelines,
- WAIRE Training Videos,
- Approved Custom WAIRE Plans,
- Compliance and Enforcement Activity
- Frequently Asked Questions (FAQs) document,
- WAIRE User Calculator, and
- WAIRE upcoming compliance due dates.

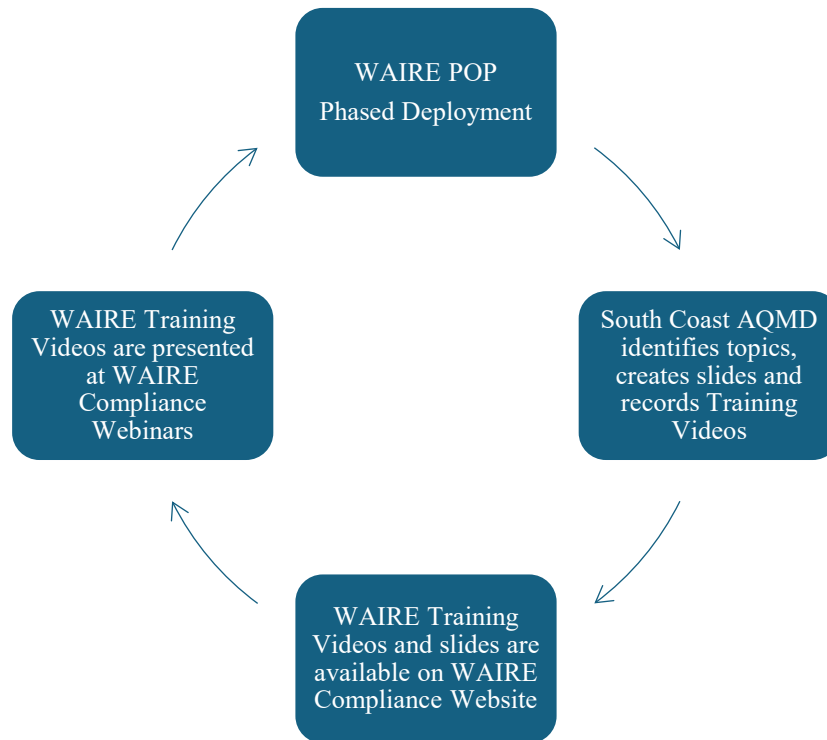
In addition, to public virtual outreach efforts, over 21,875 compliance advisory mailers were sent to all warehouse facility owners and operators that may be potentially subject to Rule 2305. As part of the compliance initiative, in 2024, South Coast AQMD inspectors have visited over 2,323 warehouse locations to provide outreach material. South Coast AQMD has also sent over 83,800 informational emails about WAIRE Program resources, conducted over 140 in person and virtual webinar presentations to warehouse facility owners/operators, elected/appointed officials, community/environmental organizations, consultants, AB 617 Community Steering Committees⁴³, various trade associations, and chambers of commerce.

Since rule adoption, a series of WAIRE Compliance Program Training Webinars were presented by South Coast AQMD to provide compliance assistance for Rule 2305. The goals of the WAIRE Compliance Program Training Webinars are to educate and provide guidance resources about Rule 2305 and to facilitate a successful Questions-and-Answers session that is of interest to all stakeholders. South Coast AQMD has hosted 7 WAIRE Compliance Program Training Webinars to provide stakeholders the space to clarify questions related to Training Videos released to the public and provide feedback regarding future

⁴³ For additional information regarding the Rule 2305's applicability to AB 617, please refer to Appendix E in this report.

enhancements. Staff have also recorded 11 Compliance Training Videos⁴⁴ with detailed information to provide guidance on how to comply with Rule 2305, such as counting truck trips, early action WAIRE Points, and instructions for the different reports required by the rule, in 5-to-15-minute segments. The Compliance Training Videos also provide a step-by-step tutorial in how to navigate and submit reports on the WAIRE POP reporting system⁴⁵. The Compliance Training Videos were uploaded on the WAIRE Program Compliance website so users may view these trainings at their own convenience. As of August 31, 2024, there have been over 7,700 views of the Compliance Training Videos outside of webinars. **Figure 20** represents a simplified diagram of the WAIRE Compliance Training Video developmental process.

Figure 21: Workflow for WAIRE POP Phased Deployment and Compliance Training Video Deployment



South Coast AQMD staff continued to work with Legislative, Public Affairs & Media Office staff to reach out to new and existing warehouse facility operators and owners on the requirements of Rule 2305, increase awareness of their obligations and the steps that can be made to meet them. South Coast AQMD staff is currently utilizing data from the WON reporting to conduct outreach to Phase 1, 2, and 3 warehouse operators to provide compliance assistance and advise of Rule 2305 requirements, including tracking truck trips and earning WAIRE Points for the 2022, 2023, and 2024 compliance periods.

⁴⁴ There are currently eleven Compliance Training Videos available online (<https://www.aqmd.gov/home/rules-compliance/compliance/waire-program/training-videos>) on the following topics: WAIRE Program Overview, Truck Trips Counting for WPCO, Early Action Opportunities to Earn WAIRE Points, Overview of WON, WON Spreadsheet Template, WAIRE POP for WONS, Early Action AWR, Overview of ISIR, WAIRE POP for ISIR, Overview of AWR, and WAIRE POP for AWR. More videos are currently under development and will be released in conjunction with future enhancements to the WAIRE POP reporting system as they are deployed to the external users.

⁴⁵ For additional information regarding the WAIRE POP reporting system, please refer to Appendix F in this report.

Key Recent Developments Related to Rule 2305

There have been some key developments related to Rule 2305 since the previous Annual Report in January 2023. These include conclusion of litigation against South Coast AQMD against adoption of Rule 2305, approval of Rule 2305 into the State Implementation Plan by U.S. EPA, and enactment of AB 98 (Carrillo).

Rule 2305 Litigation

In 2021, the California Trucking Association (CTA) and Airlines for America (A4A) brought forward a lawsuit alleging that Rule 2305 was preempted by the Clean Air Act, the Airline Deregulation Act, and the Federal Aviation Administration Authorization Act. In addition, they also claimed under state law that the mitigation fee in Rule 2305 should be considered a tax rather than an in-lieu fee under state law. In December 2023 the court granted summary judgment to South Coast AQMD⁴⁶ and denied the plaintiffs' claims.⁴⁷ In a separate order the Court also dismissed CTA's and A4A's remaining State law claims. Neither CTA nor A4A filed a notice of appeal.⁴⁸

Approval Into State Implementation Plan

In September 2024, the U.S. EPA published its final rule approving Rule 2305 into the State Implementation Plan (SIP) as a SIP-strengthening measure (89 FR 73568). As confirmed by the Court in the CTA litigation, Rule 2305 had already been fully enforceable by South Coast AQMD under state law ever since it was adopted in May 2021. By approving Rule 2305 into the SIP, it now also becomes federally enforceable by U.S. EPA and citizens pursuant to Clean Air Act section 304.

Recent State Legislation

In September 2024, the governor signed into law AB 98 that establishes many new requirements related to new warehouse developments. Key components of the bill include:

- Prohibiting cities and counties from approving new or expanded logistics uses unless they meet specified standards;
 - These standards include actions like installing ZE charging infrastructure and solar panels among other energy efficiency measures. These standards should not inhibit implementation of Rule 2305 as WAIRE Points cannot be earned only if they are required by regulations from U.S. EPA, CARB, or South Coast AQMD (see Rule 2305 (d)(3)). First, AB 98 is a statute, and second, these actions would likely be completed before a warehouse operator would occupy the warehouse and be required to earn WAIRE Points.
- Requiring South Coast AQMD to establish a process for receiving community input on how any penalties assessed and collected for violations of Rule 2305. South Coast AQMD must ensure a wide range of community groups are included in the process and that groups represent the geographic areas where there are high numbers of warehouse facilities.

⁴⁶ Intervenor defendants defending Rule 2305 included the State of California, CARB, East Yard Communities for Environmental Justice, the Peoples' Collective for Environmental Justice, the Sierra Club, the Natural Resources Defense Council, Communities for a Better Environment, and the Environmental Defense Fund.

⁴⁷ California Trucking Association v. South Coast Air Quality Management District, C.D. Cal., Case #21-cv-06341

⁴⁸ CTA v. SCAQMD, Order Re Joint Stipulation and Consent Motion to Dismiss with Prejudice (Dkt. 166), Dkt. 167, January 18, 2024.

- Requiring South Coast AQMD, upon an appropriation for this express purpose, to deploy mobile air monitoring systems within Riverside and San Bernardino Counties near warehouses. South Coast AQMD must then use this data to conduct a modeling analysis to evaluate the impact of warehouse air pollution on sensitive receptors.
- Requiring cities and counties to update their circulation elements to include truck routes by January 1, 2028;
 - AB 98 also allows the state Attorney General to impose a \$50,000 fine every six months if the required updates have not been made (penalties are returned to the air district in which the fine was imposed to be used for the district’s efforts to improve air quality).

Next Steps

The first three years of implementation for the WAIRE Program were primarily focused on program development, outreach, and providing technical support and compliance assistance for warehouse facility owners and operators subject to Rule 2305. Development of the WAIRE POP reporting system was and continues to be a significant undertaking to design, program, test, and deliver a user-friendly and robust software reporting tool for warehouse facility owners and operators subject to Rule 2305. South Coast AQMD staff also focused on outreach and developing implementation guidelines and compliance assistance resources and materials to provide technical support for the approximate 3,909 warehouses that are potentially subject to Rule 2305. Staff will continue to reach out to warehouses potentially subject to Rule 2305, focusing on upcoming Phase 3 and will continue pursuing compliance and enforcement action as necessary for non-reporting warehouses.

South Coast AQMD plans to focus on the following WAIRE Program activities in the next iteration of this report:

- Continue to identify non-compliant facilities and take the appropriate enforcement actions,
- Continue to provide compliance assistance to entities as part of NOV resolution,
- Deploy WAIRE POP reporting system AWR amendment feature for users,
- Update WAIRE Implementation Guidelines (e.g., AWR amendment process, campus-style groupings),
- Continue conducting desk audits of submitted reports, and
- Make WAIRE Program data publicly available via Facility Information Detail (F.I.N.D.)⁴⁹.

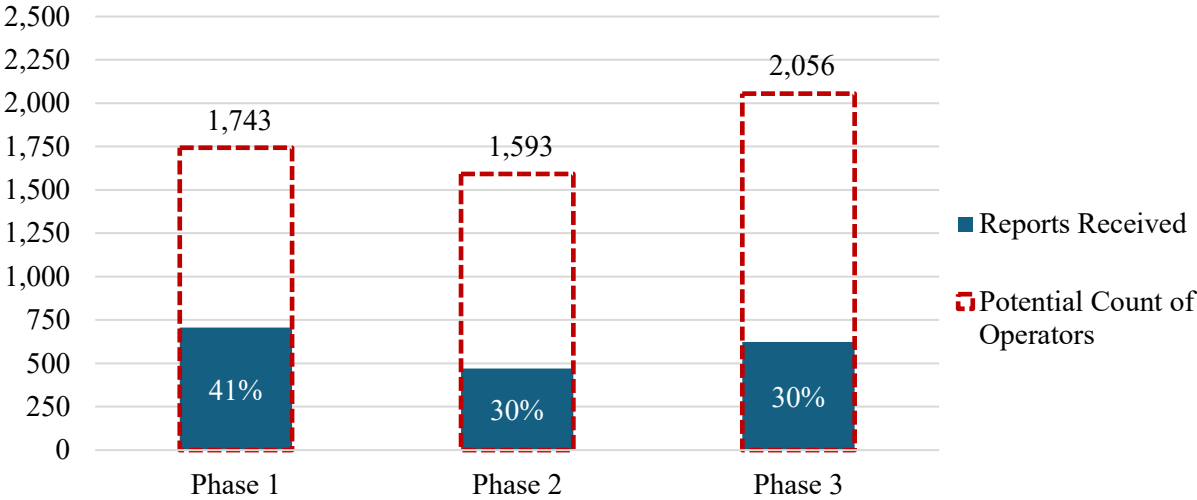
⁴⁹ South Coast AQMD has hosted three working group meetings regarding public access to WAIRE Program data. Attendees provided feedback, which staff plans to address in the future implementation of Rule 2305.

Appendix A: Initial Site Information Report (ISIR) WAIRE Menu Items Anticipated

Figures A-1 and A-2 include information about the ISIRs including the number of reports received versus the potential universe of operators subject to Rule 2305 (Figure A-1) and a breakdown of the ISIRs received and potential number of operators by county (Figure A-2).

Table A-1 provides a complete list of the anticipated WAIRE Points to be earned by warehouse operators as reported in Initial Site Information Reports (ISIRs) received through August 2024. This table also includes the number of times, or occurrences⁵⁰, a WAIRE menu action was selected in those ISIRs. Mitigation fee points are also listed in the table, although they are not part of Table 3 – WAIRE Menu in Rule 2305.

Figure A-1: Initial Site Information Reports Received and the Potential Operators Subject to Rule 2305 by Phase⁵¹



⁵⁰ These occurrences may differ from menu option to menu option. For example, the number of occurrences that corresponds to “Finalize 19.2- 350 kW charger project” reflects the number of individual chargers, or EVSE, that are anticipated to complete final energization or permit sign off in the 2022 compliance period.

⁵¹ Includes all submitted reports, paid and pending payment. Please see Appendix D: Estimate of Administrative Fees from WAIRE Program Reporting for more information regarding report payments.

Figure A-2: Initial Site Information Reports Received and Potential Operators Subject to Rule 2305 by County

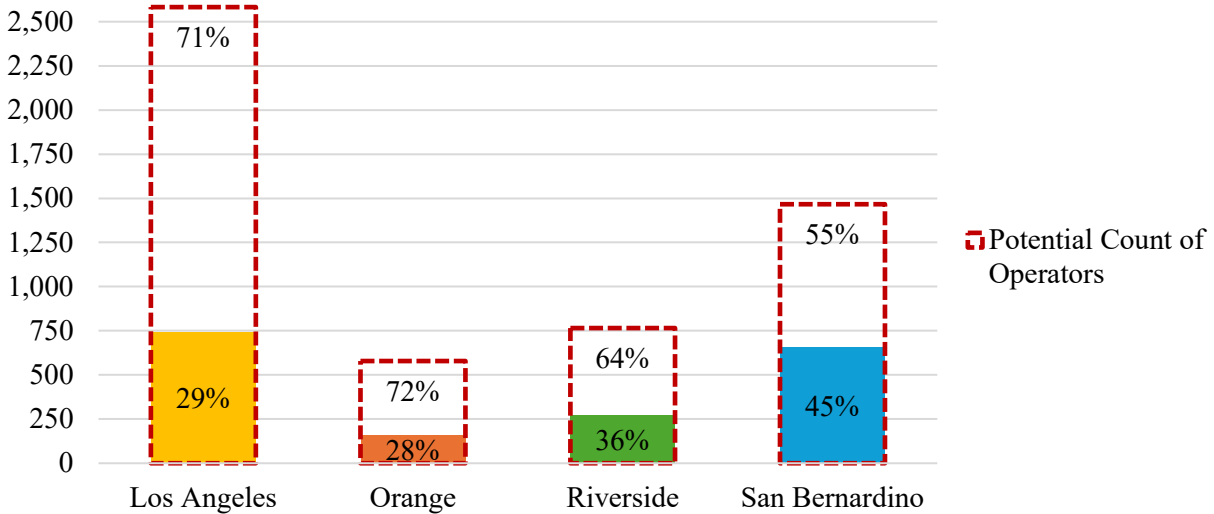


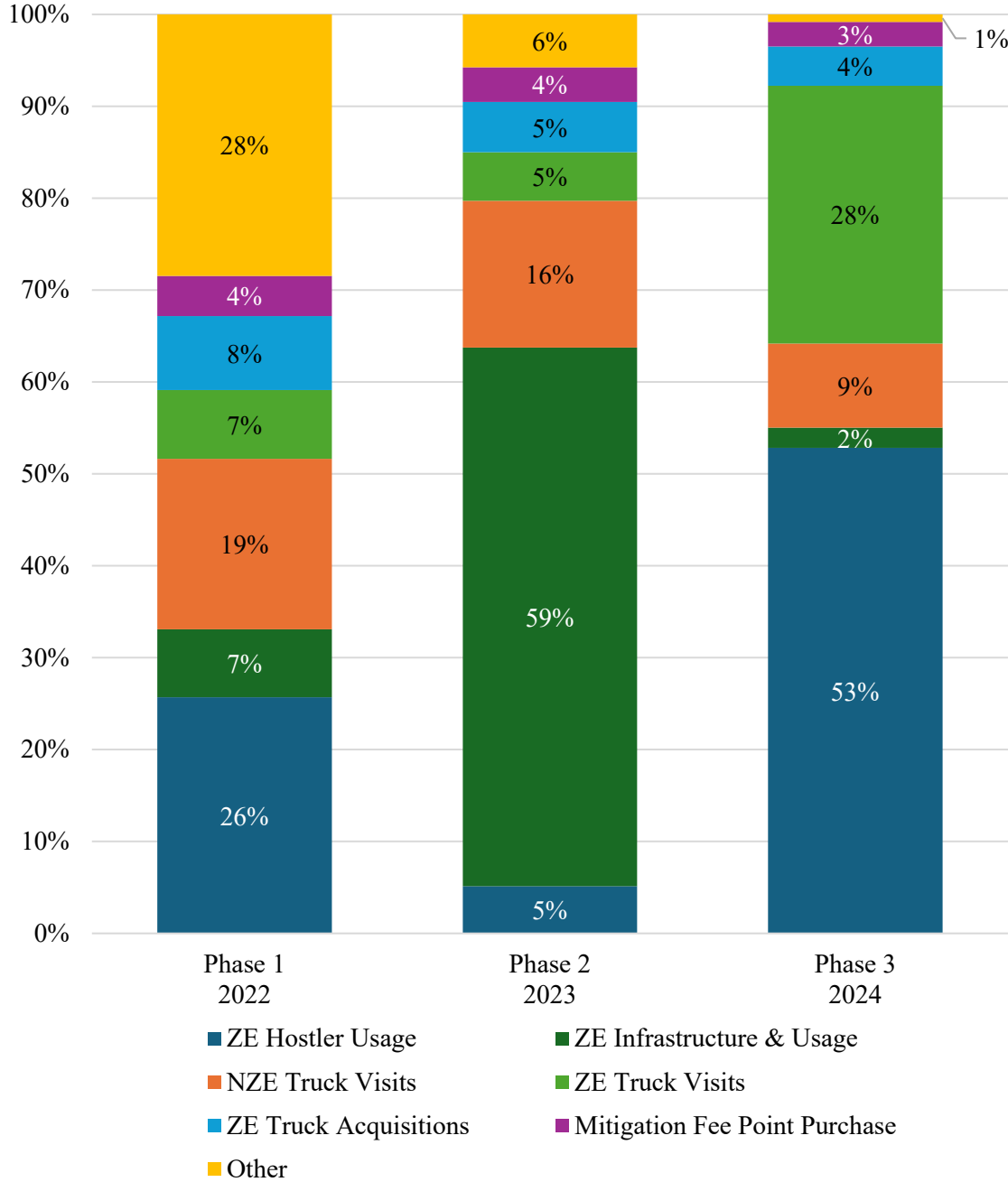
Table A-1: Anticipated WAIRE Menu Items as Reported in the ISIRs

WAIRE Menu Item Name	WAIRE Points	Occurrence ⁵⁰
ZE Hostler Usage		
ZE Hostler Usage	140,964	109
Solar Panel Installation & Usage		
Carport Solar Panel Installations	190	1
Rooftop Solar Panel Installations	108,914	29
Solar Panel Usage	1,844	83
ZE Infrastructure & Usage		
150-350 kW EVSE Acquisition	5,782	15
19.2-50 kW EVSE Acquisition	624	19
51-149 kW EVSE Acquisition	867	15
Begin Construction on 19.2-350 kW charger project	639	43
Begin Construction on TRU Plug project	3,110	11
Begin Construction on up to 19.2 kW charger project	420	28
Charger Usage	2,700	133
Finalize 19.2-350 kW charger project	4,838	29
Finalize TRU Plug project	3,444	2
Finalize up to 19.2 kW charger project	480	20
H2 Station Installations	5,860	5
H2 Station Usage	84	3
TRU Plug Acquisition	1,686	6
TRU Plug Usage	64,949	16

WAIRE Menu Item Name	WAIRE Points	Occurrence ⁵⁰
Up to 19.2 kW EVSE Acquisition	750	34
NZE Truck Visits		
NZE Class 4-7 Truck Visits	5,862	58
NZE Class 8 Truck Visits	88,295	158
ZE Truck Visits		
ZE Class 2b-3 Truck Visits	444	29
ZE Class 4-7 Truck Visits	369	30
ZE Class 8 Truck Visits	54,026	168
ZE Truck Acquisitions		
ZE Class 2b-3 Truck Acquisitions	392	13
ZE Class 4-7 Truck Acquisitions	680	5
ZE Class 8 Truck Acquisitions	17,640	30
ZE Hostler Acquisitions	20,661	88
Mitigation Fee Points Purchase		
Mitigation Fee Points Purchase	22,605	470
NZE Truck Acquisitions		
NZE Class 4-7 Truck Acquisitions	312	1
NZE Class 8 Truck Acquisitions	1,045	1
Filter Installation & Usage		
Filter Purchases	33.5	3
Filter System Installations	552	10
Custom Plan		
Custom Plan	41.9	2

Figure A-3 identifies the percentage of each WAIRE Menu action and mitigation fee points that were anticipated to be used for Rule 2305 compliance by the operators that submitted an ISIR. As shown in this figure, a variety of WAIRE Menu actions were anticipated to be selected by warehouse operators to comply with the rule, and mitigation fee points represent a very small percentage of the total WAIRE points that were anticipated for compliance.

Figure A-3: Total Anticipated WAIRE Points Menu Items and Mitigation Fees (Normalized)



Appendix B: Annual WAIRE Report (AWR) WAIRE Menu Items Implemented

Figure A-4 identifies the number of Annual WAIRE Reports (AWRs) that were received by compliance period. This figure also shows the potential universe of operators that are subject to AWR reporting. **Table A-2** provides a complete list of all WAIRE Points earned by WAIRE menu action, as reported in the AWRs received through August 2024. This table also includes the number of times, or occurrence⁵², a WAIRE Menu action category was selected in those AWRs. Mitigation points are also listed in the table, although they are not part of **Table 3: WAIRE Menu in Rule 2305**.

Figure A-4: AWRs Received out of Potential Universe of Warehouses Subject to Rule 2305 by Phase

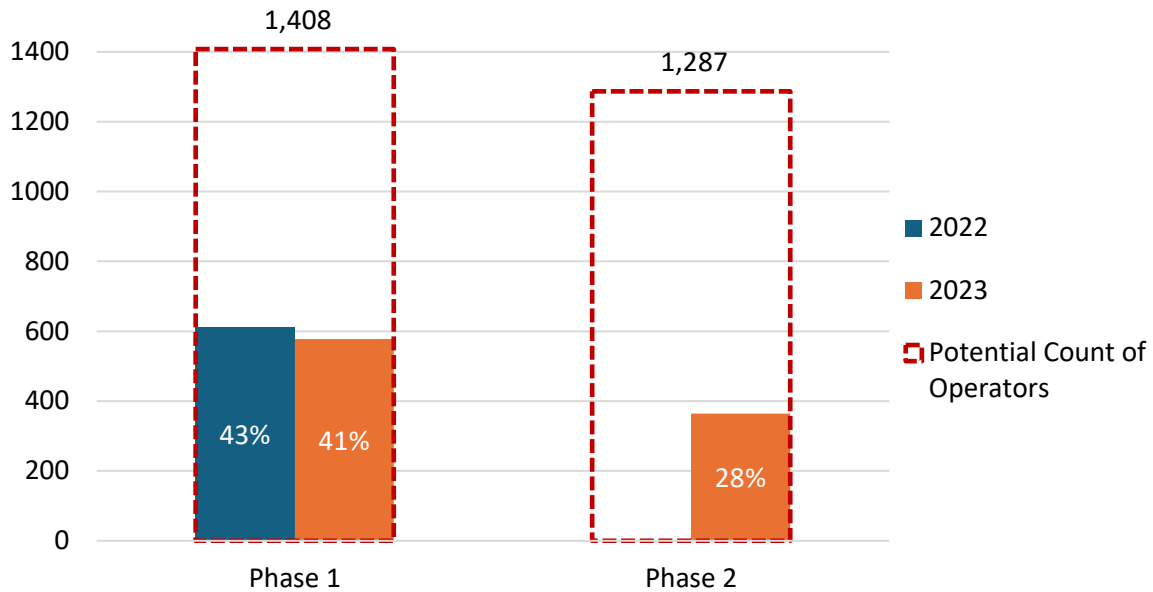


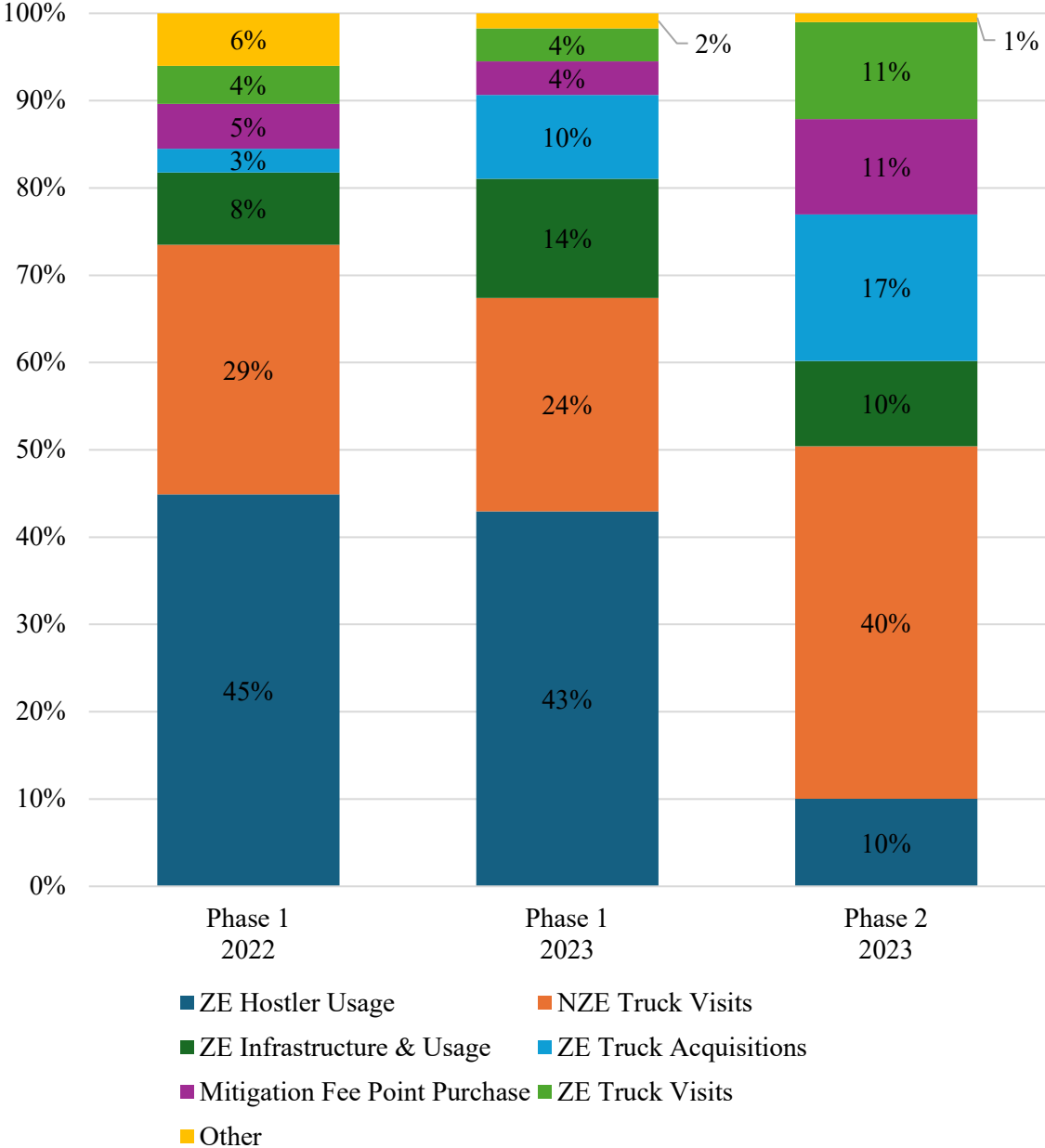
Table A-2: AWR WAIRE Menu Actions Implemented

WAIRE Menu Item Name	WAIRE Points	Occurrence ⁵¹
ZE Hostler Usage		
ZE Hostler Usage	268,263	211
NZE Truck Visits		
NZE Class 4-7 Truck Visits	9,175	119
NZE Class 8 Truck Visits	160,846	277
ZE Infrastructure & Usage		
Charger Usage	4,795	248
H2 Station Usage	828	4
TRU Plug Usage	2,033	15
150-350 kW EVSE Acquisition	9,322	79

⁵² These occurrences may differ from menu option to menu option. For example, the number of occurrences that corresponds to “Finalize 19.2- 350 kW charger project” reflects the number of individual chargers, or EVSE, that are anticipated to complete final energization or permit sign off in the 2022 compliance period.

WAIRE Menu Item Name	WAIRE Points	Occurrence ⁵¹
19.2-50 kW EVSE Acquisition	2,184	84
51-149 kW EVSE Acquisition	6,273	123
Begin Construction on 19.2-350 kW charger project	1,395	155
Begin Construction on TRU Plug project	2,735	7
Begin Construction on up to 19.2 kW charger project	365	73
Finalize 19.2-350 kW charger project	8,260	140
Finalize TRU Plug project	3,766	5
Finalize up to 19.2 kW charger project	475	95
H2 Station Installations	27,284	2
TRU Plug Acquisition	1,650	8
Up to 19.2 kW EVSE Acquisition	655	131
ZE Truck Acquisitions		
ZE Class 2b-3 Truck Acquisitions	194	15
ZE Class 4-7 Truck Acquisitions	3,057	53
ZE Class 8 Truck Acquisitions	17,868	167
ZE Hostler Acquisitions	24,563	171
Mitigation Fee Points Purchase		
Mitigation Fee Points Purchase	29,659	549
ZE Truck Visits		
ZE Class 2b-3 Truck Visits	301	47
ZE Class 4-7 Truck Visits	767	82
ZE Class 8 Truck Visits	26,447	266
NZE Truck Acquisitions		
NZE Class 4-7 Truck Acquisitions	6,058	233
NZE Class 8 Truck Acquisitions	10,051	183
Solar Panel Installation & Usage		
Carport Solar Panel Installations	144	2
Rooftop Solar Panel Installations	3,789	16
Solar Panel Usage	1,011	110
Filter Installation & Usage		
Filter Purchases	51	2
Filter System Installations	409	4

Figure A-5: Total Earned WAIRE Points Menu Items and Mitigation Fees (Normalized)



Appendix C: Early Action Annual WAIRE Report (AWR)

WAIRE Menu Items Implemented

This table provides a complete list of all the reported WAIRE Points earned by WAIRE menu item name, or category, reported in the Early Action Annual WAIRE Reports (AWRs) received from rule adoption through the 2023 compliance period (from May 7, 2021, to December 31, 2023). This table also includes the number of times, or occurrence,⁵³ a category was selected in those Early Action AWRs.

Table A-3: Early Action AWR WAIRE Menu Items Implemented

WAIRE Menu Item Name	WAIRE Points	Occurrence ⁵¹
ZE Hostler Usage		
ZE Hostler Usage	36,546	36
NZE Truck Visits		
NZE Class 8 Truck Visits	13,689	91
NZE Class 4-7 Truck Visits	219	6
ZE Truck Visits		
ZE Class 8 Truck Visits	6,940	41
ZE Class 2b-3 Truck Visits	2,866	13
ZE Class 4-7 Truck Visits	7	1
ZE Truck Acquisitions		
ZE Hostler Acquisitions	5,664	10
ZE Class 2b-3 Truck Acquisitions	3,554	12
ZE Class 8 Truck Acquisitions	475	4
ZE Infrastructure & Usage		
Finalize 19.2-350 kW charger project	5,723	8
Charger Usage	1,048	46
Begin Construction on 19.2-350 kW charger project	207	10
19.2-50 kW EVSE Acquisition	182	4
51-149 kW EVSE Acquisition	153	3
150-350 kW EVSE Acquisition	118	1
Begin Construction on up to 19.2 kW charger project	105	4
Up to 19.2 kW EVSE Acquisition	90	2
H2 Station Installations	58	1
TRU Plug Usage	41	1
Finalize up to 19.2 kW charger project	10	1
H2 Station Usage	6	1
Solar Panel Installation & Usage		

⁵³ These occurrences may differ from menu option to menu option. For example, the number of occurrences that corresponds to “Finalize 19.2- 350 kW charger project” reflects the number of individual chargers, or EVSE, that completed the final energization or permit sign off in the 2021 compliance period.

WAIRE Menu Item Name	WAIRE Points	Occurrence ⁵¹
Rooftop Solar Panel Installations	1,900	8
Solar Panel Usage	242	35
Carport Solar Panel Installations	76	1

Figure A-6: Early Action AWR WAIRE Menu Items by County

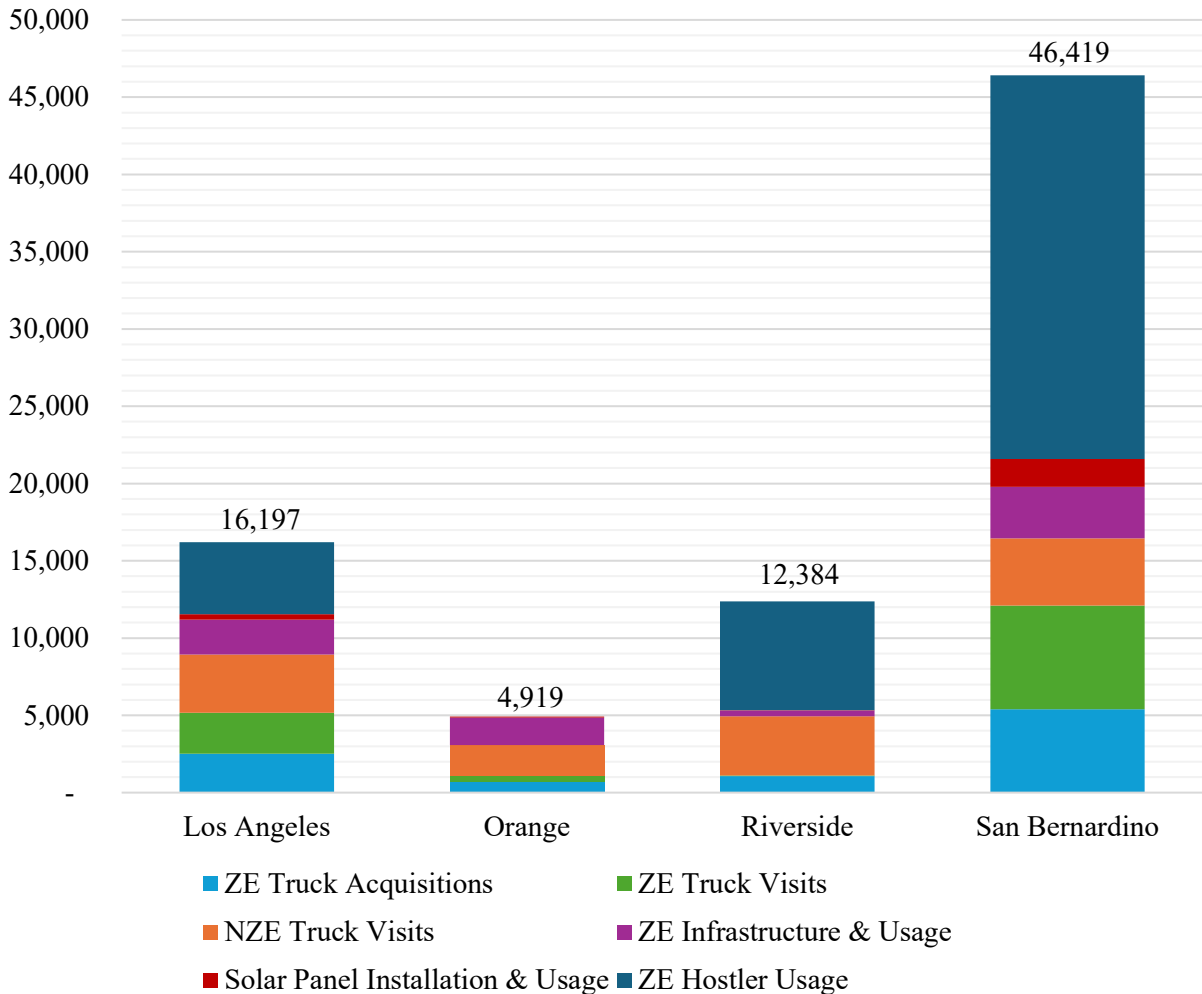
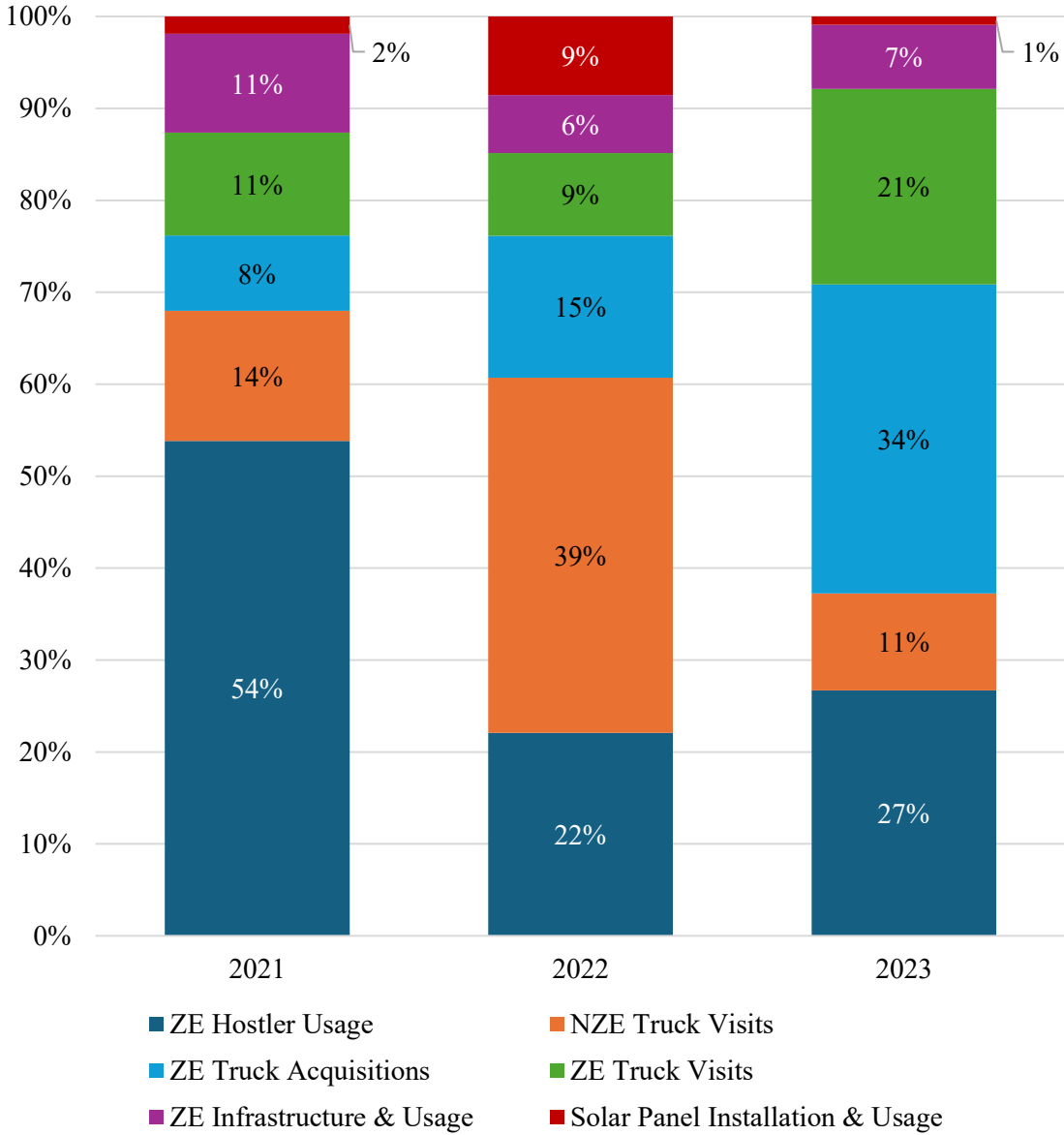


Figure A-7: Early Action AWR WAIRE Menu Items Compliance Period (Normalized)



Appendix D: Estimate of Administrative Fees from WAIRE Program Reporting

Per Rule 316, WONs, ISIRs, and AWRs require a filing fee to be paid per report submitted, excluding some exceptions detailed below. Please see **Table D-1** for estimates of filing fees collected from WONs, ISIRs, and AWRs⁵⁴ as of August 31, 2024, respectively.⁵⁵

Table D-1: Estimate of Filing Fees Paid

Report	Total Filing Fees Paid
WONs	\$79,127.29
ISIRs	\$232,390.44
AWRs	\$684,399.78

Rule 316 also requires administrative fees to be collected for Custom WAIRE Plan application evaluations and mitigation fees. A 6.25% administrative fee is collected of the mitigation fee paid by the warehouse owner or operator. As of August 31, 2024, approximately \$1.6 million has been paid in Mitigation Fee Program administrative fees.

⁵⁴ AWRs includes Early Action AWRs. Phase 3 AWRs are not included, as their due date is January 31, 2025.

⁵⁵ Subject to final auditing by South Coast AQMD.

Appendix E: Warehouse Indirect Source Rule (ISR) Implementation in Assembly Bill 617 (AB 617) Communities

Introduction

Assembly Bill 617 (AB 617)⁵⁶ is a 2017 California law that addresses disproportionate impacts of air pollution in environmental justice communities. Since AB 617's first year of implementation in 2018, South Coast AQMD has designated six communities for participation in the program:

- Year 1 Communities (2018)
 - East Los Angeles, Boyle Heights, West Commerce (ELABHWC)
 - San Bernardino, Muscoy (SBM)
 - Wilmington, Carson, West Long Beach (WCWLB)⁵⁷
- Year 2 Communities (2019)
 - Eastern Coachella Valley (ECV)
 - Southeast Los Angeles (SELA)
- Year 3 Community (2021)
 - South Los Angeles (SLA)

AB 617 requires South Coast AQMD to work with each community to develop and adopt a Community Emissions Reduction Plan (CERP) one year from designation. To achieve this goal, each community established a Community Steering Committee (CSC), comprised of people who may live, work, own businesses, or attend school within the community, to lead the CERP development process in partnership with South Coast AQMD and the California Air Resources Board (CARB). Through the CERP development process, the CSC identified air quality priorities and worked with various entities (e.g., regulatory agencies, local organizations) to develop exposure and/or emission reduction measures to address those air quality priorities.

All six of the AB 617 communities within South Coast AQMD's jurisdiction identified impacts from neighborhood truck traffic or diesel mobile sources⁵⁸ as an air quality priority for their respective communities due to the impact from these sources on a day-to-day basis. For example, the community of WCWLB is home to the Port of Long Beach and Port of Los Angeles (Ports). The Ports serve as a gateway for the world's markets through the movement of goods. These goods are transported to and from the Ports by ships, trains, and heavy-duty trucks. Trucks travel along freeways that pass through the AB 617-designated communities and often travel near and through local neighborhoods to reach their destinations thus exposing residents to harmful air pollutants.

NO_x is the primary pollutant that needs to be reduced to meet federal and state air quality standards, and mobile sources associated with goods movement make up about 52 percent of all NO_x emissions in the

⁵⁶ California Health and Safety Code Section 44391.2

⁵⁷ Wilmington, Carson, West Long Beach Community Emissions Reduction Plan, <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/wilmington/cerp/final-cerp-wcwlb.pdf>

⁵⁸ AB 617 related air quality priorities include neighborhood and freeway traffic from trucks and automobiles, neighborhood truck traffic, diesel mobile sources, truck traffic and freeways, and mobile sources.

South Coast Air Basin. Trucks are the largest source of NO_x emissions in the air basin and associated with warehouses. Truck activity is focused at warehouses, which as the Socioeconomic Impact Assessment identifies, are disproportionately located in disadvantaged communities.⁵⁹ The population within 0.5-mile of a large warehouse has a population-weighted average CalEnviroScreen 3.0 (CES 3.0) Score of 46.6 (85th percentile statewide), while the South Coast AQMD jurisdiction has a population weighted average CES 3.0 Score of 33.9 (67th percentile statewide). The Final Socioeconomic Impact Assessment for Rule 2305 and Rule 316 identified that risks posed from PM_{2.5} and diesel particulate matter (DPM) are also higher for populations located within 0.5-mile of warehousing facilities.

Public health benefits to disadvantaged communities were identified as part of the analysis for the benefits of Rule 2305 and Rule 316 at the time of adoption. Public health is on the forefront of the minds of the community members participating in the AB 617 program. Community groups often come to South Coast AQMD as a data source for emissions information. South Coast AQMD anticipates that community groups affiliated with AB 617 or other environmental justice efforts will seek data related to the WAIRE Program implementation. South Coast AQMD plans to release WAIRE Program-related data through its Facility Information Detail (F.I.N.D.) tool. South Coast AQMD is actively working with District Counsel and Information Management to determine how F.I.N.D. may be updated to support such data inquiries.

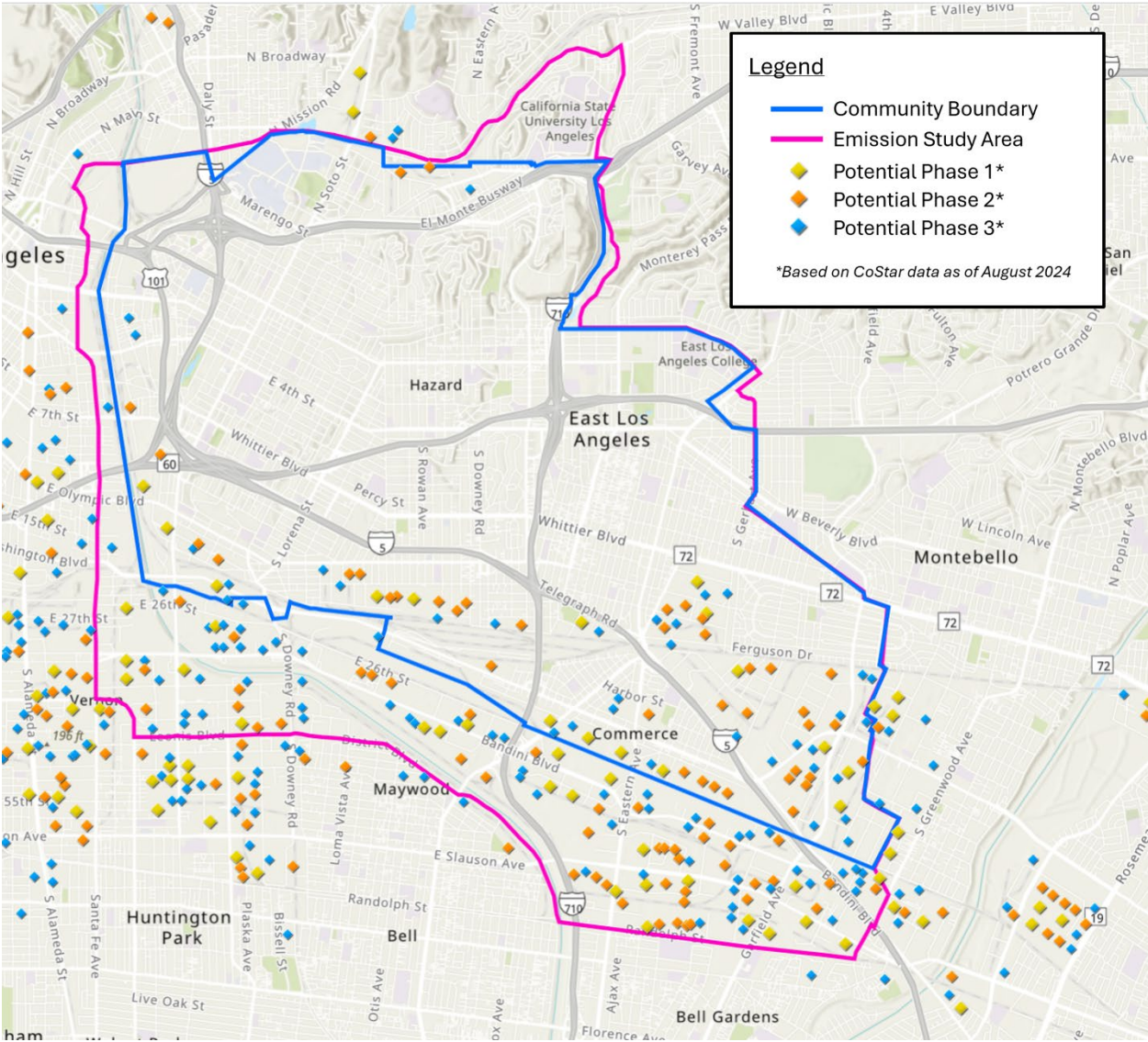
Figure A-8 through **Figure A-13** provide a visual representation of potential warehouse locations subject to Rule 2305 that are within each AB 617 designated community within South Coast AQMD's jurisdiction.

⁵⁹ The Socioeconomic Impact Assessment is Attachment K of the Rule 2305 and Rule 316 Governing Board package (<http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf>).

Year 1 Communities

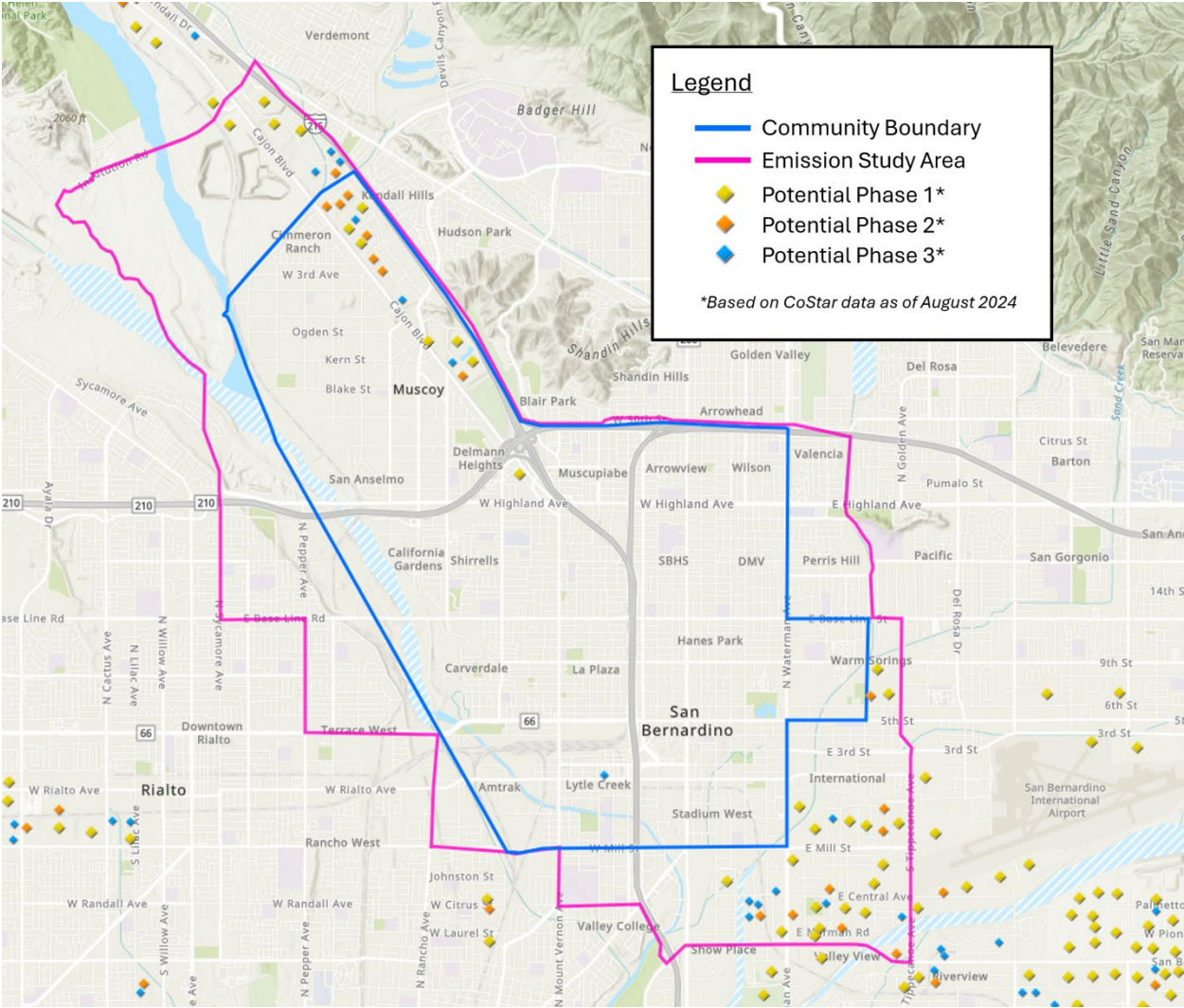
East Los Angeles, Boyle Heights, West Commerce (ELABHWC)

Figure A-8: Potential Warehouses Subject to Rule 2305 Located in East Los Angeles, Boyle Heights, West Commerce (ELABHWC) by Phase



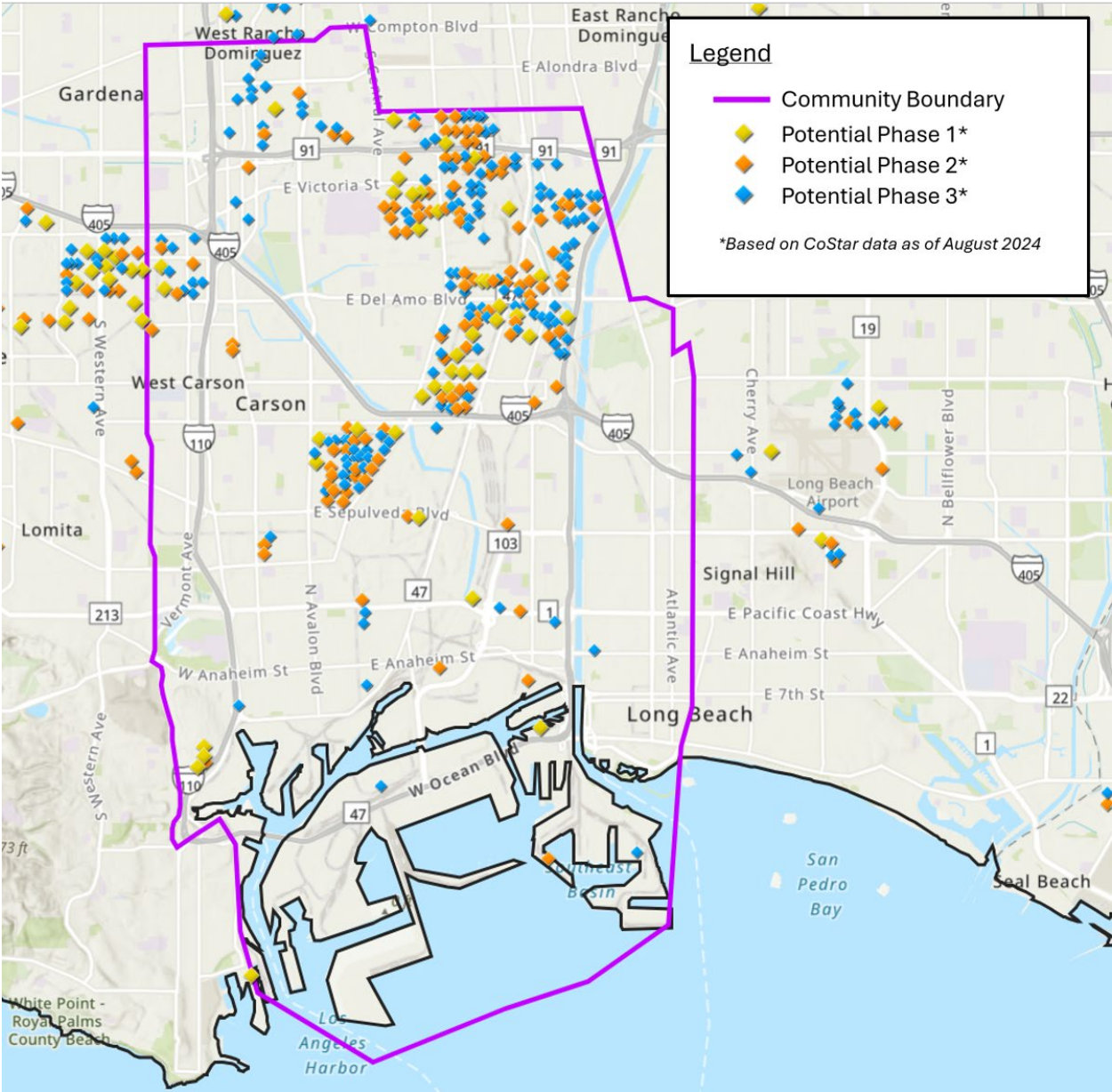
San Bernardino, Muscoy (SBM)

Figure A-9: Potential Warehouses Subject to Rule 2305 Located within San Bernardino, Muscoy (SBM) by Phase



Wilmington, Carson, West Long Beach (WCWLB)

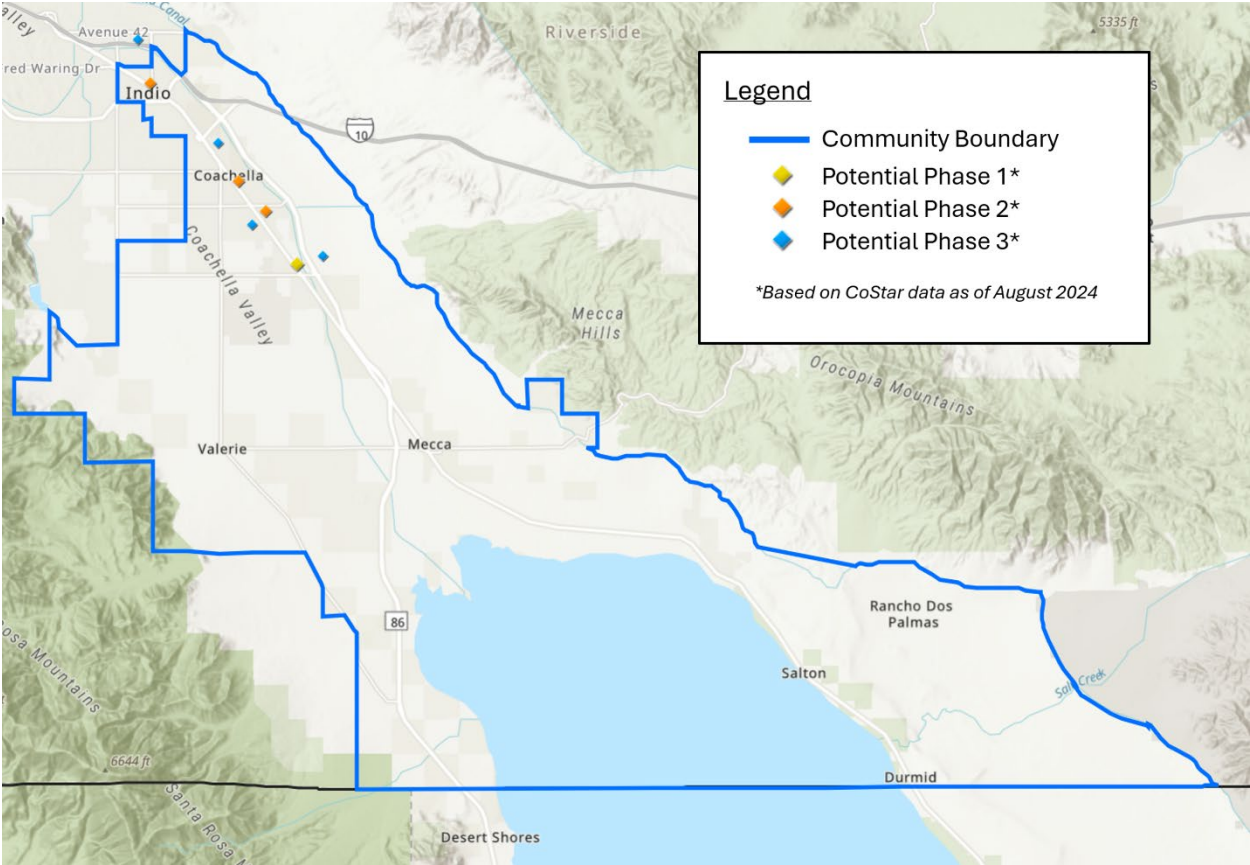
Figure A-10: Potential Warehouses Subject to Rule 2305 Located within Wilmington, Carson, West Long Beach (WCWLB) by Phase



Year 2 Communities

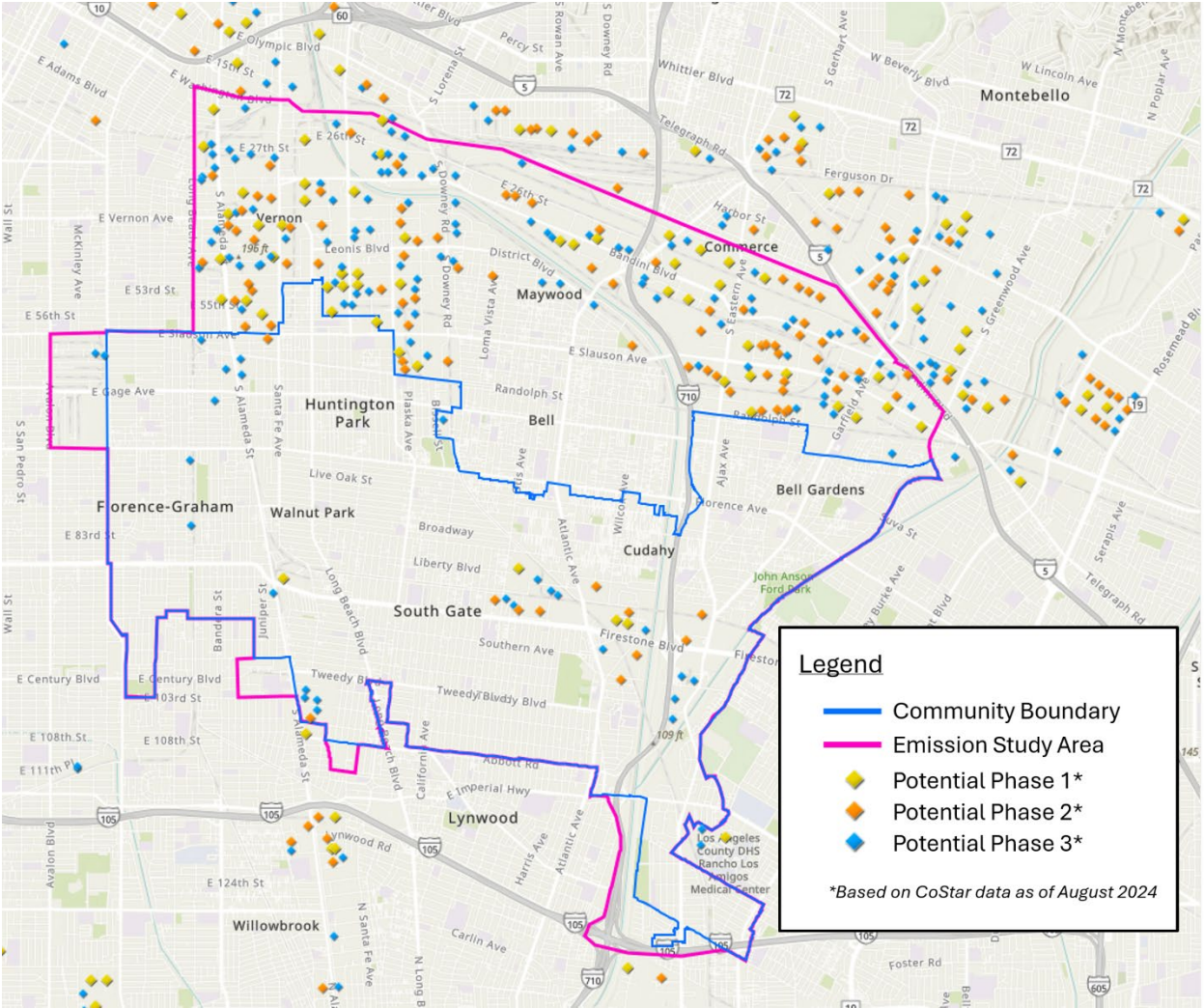
Eastern Coachella Valley (ECV)

Figure A-11: Potential Warehouses Subject to Rule 2305 Located within Eastern Coachella Valley (ECV) by Phase



Southeast Los Angeles (SELA)

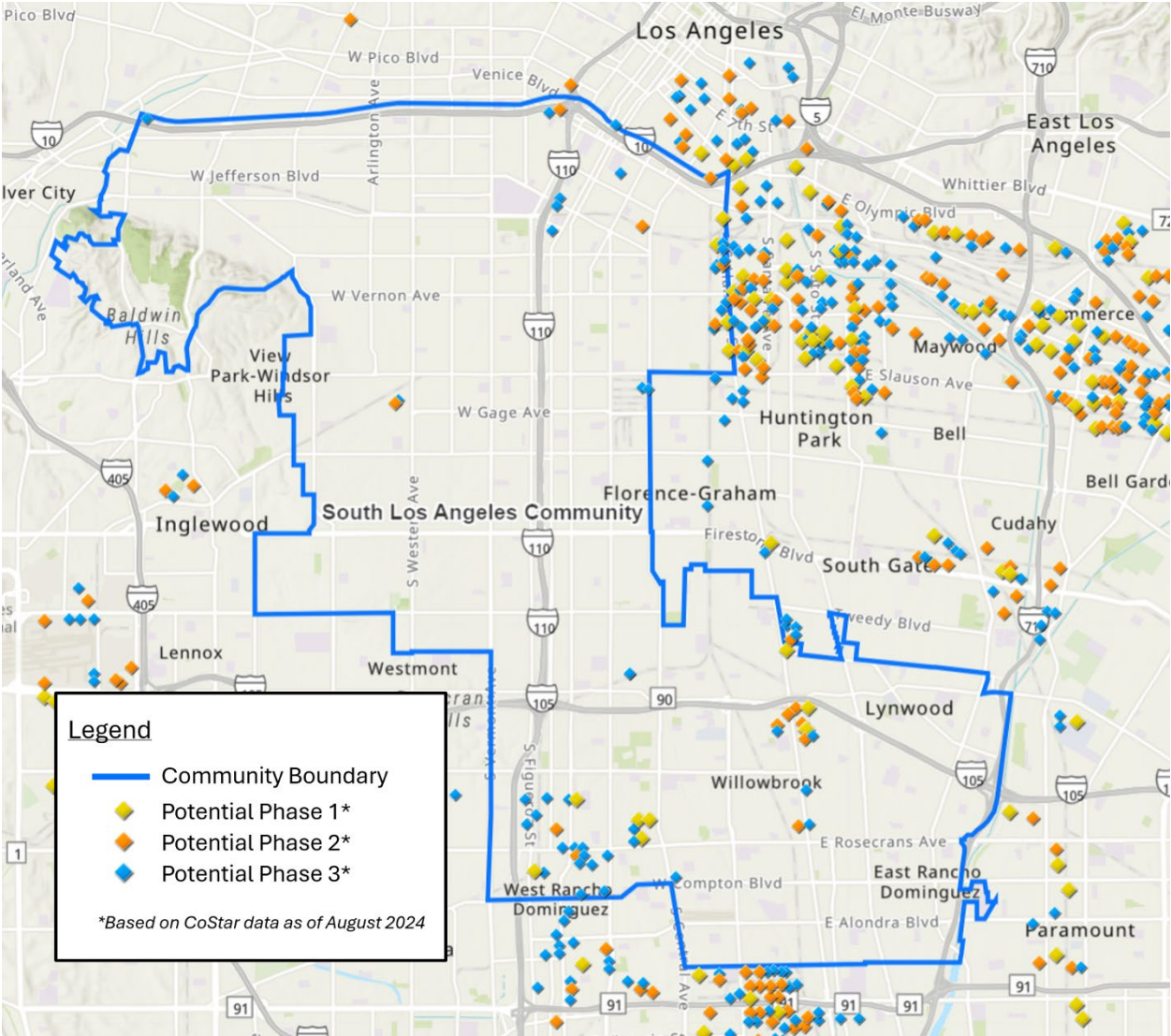
Figure A-12: Potential Warehouses Subject to Rule 2305 Located within Southeast Los Angeles (SELA) by Phase



Year 3 Community

South Los Angeles (SLA)

Figure A-13: Potential Warehouses Subject to Rule 2305 Located within South Los Angeles (SLA) by Phase



Appendix F: WAIRE Program Online Portal (POP)

As part of the Resolution for Rule 2305 and Rule 316, the South Coast AQMD Governing Board directed South Coast AQMD staff to develop an online portal for regulated entities to submit required reports as required by Rule 2305. Rule 2305 requires all reporting be submitted by an authorized official of either the warehouse operator, or warehouse facility owner if the WAIRE Points are earned by the warehouse facility owner, through the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program Online Portal (POP), or WAIRE POP reporting system. After Governing Board adoption in May 2021, South Coast AQMD staff from Planning, Rule Development, and Implementation and Information Management began developing WAIRE POP to support warehouse facility owners and operators comply with the reporting requirements set forth by Rule 2305.

Development & Deployment

Following the adoption of Rule 2305 in May 2021, South Coast AQMD began working with a South Coast AQMD contractor, AgreeYa Solutions, Inc., in the development and design of the WAIRE POP reporting system that warehouse facility owners and operators would use to submit their Rule 2305 compliance reports. The web application was developed to provide South Coast AQMD the ability to track warehouse facility owner or operator activities recorded through the various reporting requirements set forth by the rule, such as those related to implementing, acquiring, or using near zero emissions (NZE) and/or zero emissions (ZE) on-road trucks, ZE cargo handling equipment, ZE charging/fueling infrastructure, solar panels, or air filtration systems installed or replaced at residences, schools, daycares, hospitals, or community centers. This development also included a test version of the WAIRE POP reporting system that was rolled out to the Stage environment for testing and evaluation internally by South Coast AQMD. The purpose of the testing environment was to verify through extensive staff testing that all sections of WAIRE POP were working correctly and efficiently within the whole system prior to releasing WAIRE POP for external users.

WAIRE POP was first deployed in August 2021 to allow warehouse facility owners to submit the Warehouse Operations Notification (WON) by the September 1, 2021 deadline set forth by Rule 2305. Since then, several phases of the WAIRE POP reporting system were developed and tested extensively by internal staff and the contractor. Each build phase was then deployed to the production environment for external users to submit their Rule 2305 required reports.

To date, the project has been separated into four major phases:

- Phase 1 was split into two sub-phases. Phase 1.1 was to develop a publicly available web portal where warehouse facility owners can register, submit, and pay for their WON report. Phase 1.2 was to develop a mechanism for South Coast AQMD staff to process report data into the WAIRE POP database.
- Phase 2 of the WAIRE POP development included adding new features allowing external users the ability to file AWRs and ISIRs through the WAIRE POP reporting system.
- Phase 3, including Phase 3.1 through 3.5: The sub-phases of Phase 3 were focused on enhancing WAIRE POP in a variety of ways, including but not limited to: addressing existing bugs and user interface fixes, adding WAIRE POP logic to ensure fields are entered correctly, correcting WAIRE POP logic for ISIR submittals to allow users to select the compliance period for the report, correcting WAIRE POP logic to determine phase by the warehousing activities field rather than building size to align with the rule, updating the logic within the AWR report

builder to deduct WAIRE Points claimed in the order in which the user added options to offset the WPCO, correcting WAIRE Point expiration dates, allowing warehouse facility owners to file AWRs to voluntarily earn WAIRE Points, allowing staff to create transfer groups pursuant to the rule, and initial scope development for campus-style reporting.

- Phase 4, consisting of Phases 4.1, 4.2, 4.2.1, 4.3, 4.3.1, and 4.4: The sub-phases of Phase 4 were focused on enhancing WAIRE POP in a variety of ways, including but not limited to: high priority enhancement tasks identified by staff, enhancing backend data management for internal staff, adding logic for truck trip entries to improve accuracy in reporting, allowing multiple facility IDs to be created at the same address for warehouse operators who lease the same building, correcting language to facilitate user filings to prevent reports submittals for the incorrect compliance period, correcting WAIRE Point expiration dates and transferring of WAIRE Points to ensure they are aligned with the rule, correcting WAIRE Menu calculations for TRU plugs, developing and deploying an option to flag the report if the user is offsetting their WPCO by claiming a late action,⁶⁰ enhancing WAIRE POP to automatically display new compliance periods as options without needing staff deployment or disabling the system, allowing users to submit a report for a partial year (< 12 months) in the compliance period, adding logic to prevent mitigation fees to be paid when WPCO is less than 10, and the extensive scope development and testing for submitting AWR amendments with internal and external features⁶¹.

Future WAIRE POP Enhancements

As more users utilize the WAIRE POP reporting system, staff will continue to assess and prioritize potential enhancements to the web application that may provide a more user-friendly experience or facilitate improved internal data management for staff analysis. The proposed enhancements are discussed internally based on WAIRE Program resources and user needs. Notable anticipated upcoming enhancements include campus-style reporting and an AWR amendment feature.

Once the AWR amendment feature is deployed, South Coast AQMD is considering the following features or enhancements to WAIRE POP:

- Updating WON excel template to require field entries,
- Updating backend reporting framework to support external campus-style report submittals,
- Enhancements to the WAIRE POP relational database structure to facilitate making data publicly available on F.I.N.D. or via bulk data download,
- Enhanced database logic to validate approved Custom WAIRE Plans,
- ISIR and early action AWR Amendments,
- Facility ID validation against existing South Coast AQMD CLASS database,
- Various updates to web application pages to provide clearer direction,
- Additional high priority enhancement tasks identified by staff as needed, and
- Internal user tools/features.

⁶⁰ For additional context, see the Frequently Asked Questions document (http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/r2305_faqs.pdf).

⁶¹ The AWR Amendment feature will be deployed prior to January 1, 2025.